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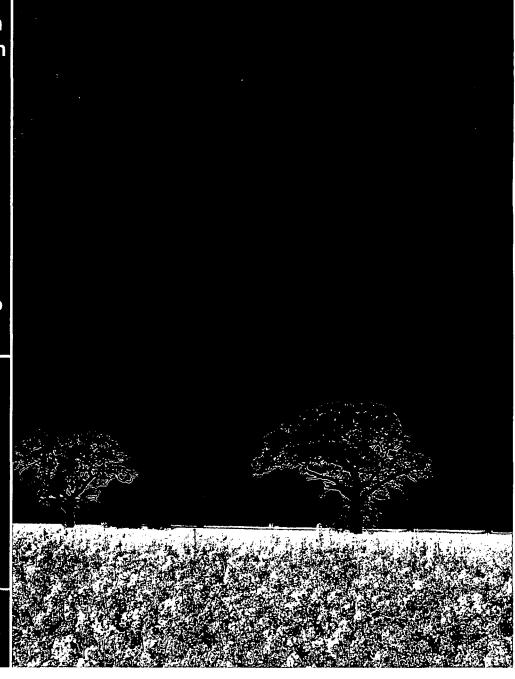
Draft Project Completion Report – Well Installation and Groundwater Monitoring

Omega Chemical Operable Unit 2, Whittier, California EPA Site ID#09BC Docket No. 9-2004-004

September 28, 2006

Omega Small Volume Group (OSVOG)







Infrastructure, buildings, environment, communications

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Subject:
Omega Chemical Operable Unit 2, Whittier,

California, EPA Site ID#09BC,
Docket No. 9-2004-004

ARCADIS Project No.:

CA000646.0001.000015

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Draft Project Completion Report - Well Installation and Groundwater Monitoring

Omega Chemical Operable Unit 2, Whittier, CA

EPA Site ID#09BC Docket No. 9-2004-004



Infrastructure, buildings, environment, communications

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Draft Project Completion Report - Well Installation and Groundwater Monitoring

Omega Chemical Operable Unit 2, Whittier, CA

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September 28, 2006

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Omega Chemical Operable Unit 2, Whittier, CA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION IX

Report Tile:	Project Completion Report - Omega Chemical Superfund Site
Site Name:	Omega Chemical Superfund Site - Operable Unit 2
Site Location:	Whittier
City/State/Zip:	Los Angeles County, California
Site EPA ID#:	<u>09BC</u>
Anticipated Sampling Dates:	<u>July 2006</u>
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Omega Chemical Operable Unit 2, Whittier, CA

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ACRONYMS AND ABBREVIATIONS

Acronym	Description
ARCH	Air Rotary Casing Hammer
bgs	below ground surface
CDM	Camp Dresser & McKee
CDWR	California Department of Water Resources
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980 (USC §§ 9601 et seq.) SUPERFUND
COCs	chemicals of concern
CPT	cone penetrometer test
CRQL	Contract Required Quantitation Limits
DCA	dicholoroethane
DCE	dichloroethene
DD	drawdown
DHS	Department of Health Services
DO	dissolved oxygen
DQO	Data Quality Objective(s)
DTW	depth to water
EPA	Environmental Protection Agency
FSP	Field Sampling Plan
Freon 11	trichlorofluoromethane
Freon 113	trichlorotrifluoroethane
GDI	Gregg Drilling, Inc.
HCI	hydrochloric acid
H₂SO₄	sulfuric acid
HASP	Health & Safety Plan
LCS	laboratory control samples

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Acronym	Description
LDC	Laboratory Data Consultants of Carlsbad, California
LNR	long normal resistivity
MCL	Maximum Contaminant Level
MDL	method detection limit
mg/L	milligram per liter (or parts per million)
ml	Milliliter
ml/min	milliliter per minute
MS/MSD	Matrix Spike/Matrix Spike Duplicate
μg/L	microgram per liter (or parts per billion)
msl	mean sea level
NaOH	sodium hydroxide
ND	non detected
NDMA	N-nitrosodimethylamine
NTUs	nephelometric turbidity units
Omega	Former Omega Chemical Corporation Facility
ORP	oxidation reduction potential
osvog	Omega Small Volume Group
Р	pump inlet
PCE	Tetrachloroethene
Point	single point resistance
PVC	polyvinyl chloride
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
QED	QED Environmental
RI/FS	Remedial Investigation/Feasibility Study

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Acronym	Description
RIWP	Remedial Investigation Work Plan
RPD	relative percent difference
RRF	relative response factors
SAP	Sampling and Analysis Plan
SFS #1	Santa Fe Springs Well No. 1
Simulprobe	Maxiprobe Simulprobe® Sampling System
SNR	short normal resistivity
sow	Statement of Work
SP	spontaneous potential
svoc	semi-volatile organic compound
TAL	Target Analyte List
TCA	trichloroethane
TCE	trichloroethene
TCP	trichloropropane
TDS	total dissolved solids
TKN	total kjeldahl nitrogen
ТМВ	trimethylbenzene
TOC	total organic carbon
TOS	top of well screen
UAO	Unilateral Administrative Order
USA	Underground Service Alert
USEPA	United States Environmental Protection Agency
VOA	volatile organic analyte
VOC	volatile organic compound
WDC	Well Development Corporation

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Executive Summary

Background

This Project Completion Report has been prepared on behalf of the former Omega Small Volume Group (OSVOG) in response to the United States Environmental Protection Agency's (EPA) First Amended Unilateral Administrative Order (First Amended UAO) for Response Action (EPA Region IX, CERCLA Docket No. 9-2004-0004).

The Statement of Work (SOW) attached to the First Amended UAO included the installation and sampling nine single-cased groundwater monitoring wells (Proposed Monitoring Well MW-12, MW-13, MW-14, MW-15, MW-16, MW-18, MW-19, MW-21 and MW-22) and two triple-nested groundwater monitoring wells (MW-17 and MW-20) downgradient of the former Omega facility; the installation of one extraction well; the performance of one round of groundwater monitoring; and the preparation of a Project Completion Report.

A Remedial Investigation Work Plan (RIWP, ARCADIS 2004a), a Quality Assurance Project Plan (QAPP, ARCADIS 2004b), a Health and Safety Plan (HASP) and a Field Sampling Plan (FSP, ARCADIS, 2005) were prepared in response to the UAO. The RIWP and FSP are in general accordance with EPA's *Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (EPA, 1988)*.

EPA issued comments to the FSP on January 5, 2005. In their comments, EPA directed OSVOG to move wells MW-16 and MW-18, and to change them from single-cased wells to triple-nested wells. In addition, EPA directed that an additional triple-nested well (MW-23) be installed upgradient of the former McKesson and Angeles Chemical Corporation sites.

The FSP was conditionally approved by EPA on January 27, 2005. In the EPA conditional approval letter, EPA directed OSVOG to install a dual-nested well at the location of MW-13, instead of the originally requested single-cased well.

The final scope of work directed by EPA included the installation of 23 groundwater monitoring wells in 12 locations, the installation of one groundwater extraction well, the development of the wells, installation of dedicated bladder pumps in the groundwater monitoring wells, and the sampling of the groundwater monitoring wells. This report

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documents the procedures followed and results of the implementation the FSP and the modified scope of work.

Implementation of FSP

Between May 2005 and April 2006, ARCADIS installed a total of 24 wells at 13 locations (23 groundwater monitoring wells and one extraction well). Single-cased wells were installed at locations MW-12, MW-14, MW-15, MW-19, MW-21, and MW-22. A dual-nested well was installed at MW-13. Triple-nested wells were installed at MW-16, MW-17, MW-18, MW-20 and MW-23. A 4-inch diameter extraction well was installed at EW-1. Wells were installed in accordance with the approved FSP. Well locations are shown on Figure 2.

Depth-specific water samples were collected during drilling procedures, using a Simulprobe[®] sampler. This sampling was conducted to evaluate the vertical and horizontal extent of volatile organic compounds (VOCs) in groundwater and to obtain a profile of VOCs within the plume. These samples were analyzed for VOCs using EPA Method 8260B. Table 4 summarizes depth-specific water sample VOC results.

Upon completion of drilling and well installation activities, wells were developed by pumping, swabbing, and/or air-lifting. Top of casing were surveyed by CalVada Surveying, Inc. of Corona, California on August 5, 2005, and June 14 and 24, 2006. The survey data are summarized in Table 1 and included as Appendix F. Depth to water and total depths of the wells were gauged in June 2006, and are summarized in Table 2. These data were used to finalize design of dedicated bladder pumps by QED Environmental Systems (QED), and to construct groundwater contour lines.

The dedicated bladder pumps, manufactured by QED, of Ann Arbor, Michigan were installed in all wells except MW-13A, MW-17A, MW-19 and EW-1. Well MW-13A is a dry well. MW-17A and MW-19 producer little water. It was decided, in consultation with EPA, that dedicated pumps were not necessary at this time for these wells.

Groundwater monitoring activities were conducted between July 6 and July 13, 2006. Water samples were submitted to EMAX Laboratories, Inc. of Torrance, California for analysis. A baseline analysis was performed on the water samples collected. This baseline consisted of the testing groundwater from the monitoring wells for VOCs by EPA Method 8260B, semi-volatile organic compounds (SVOCs) by EPA Method 8270C, and chemicals including perchlorate, 1,2,3-trichloropropane (1,2,3-TCP), 1,4-dioxane, and N-Nitrosodimethylamine (NDMA) using EPA Methods 314, 8260SIM,

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8270C and 1625, respectively. In addition, the groundwater was analyzed for metals including hexavalent chromium using EPA Method 218.6; and dissolved metals (Target Analyte List [TAL]), including boron and silicon, using EPA Methods 6010/7000, 200.8, and 245.1. Additional parameters included cyanide using EPA Method 335.2, anions (bromide, chloride, fluoride, sulfates, nitrate-N, Nitrite-N, and orthophosphates) using EPA Method 300.0, total dissolved solids (TDS) using EPA Method 160.1, total kjeldahl nitrogen (TKN) using EPA Method 351.3 and total organic carbon (TOC) using EPA Method 415.1.

Findings

Stratigraphic units believed to have been encountered during drilling activities included the Bellflower aquiclude, the Gaspur, Gage, Artesian, Hollydale, Jefferson, and Lynwood aquifers. This information was derived from a comparison of materials encountered during drilling activities, and those published in Department of Water Resources Bulletin 104 (DWR 1961). Further details regarding materials encountered during drilling are detailed in the project well logs contained herein.

Chemical results of the July 2006 groundwater monitoring event indicate the following:

- Groundwater sampling results from all wells that were analyzed show some evidence of the presence of VOCs. Two of the primary VOCs of concern are tetrachloroethene (PCE) and trichloroethene (TCE).
 - Concentrations of PCE above the California Maximum Contaminant Level
 (MCL) of 5 micrograms per liter (µg/L) were identified in MW-12, MW-14, MW-15, MW-17A, MW-17B, MW-18A, MW-20A, MW-20B, MW-23B, and MW-23C.
 - Concentrations of TCE above the MCL of 5 µg/L were identified in MW-12, MW-14, MW-15, MW-16B, MW-17A, MW-17B, MW-17C, MW-20A, MW-20B, MW-23B, and MW-23C.
 - TCE and PCE were not identified at levels above their respective MCLs in MW13B, MW-16A, MW-16C, MW-18B, MW-18C, MW-19, MW-20C, MW-21, MW-22 and MW-23D.
 - Well MW-13A did not contain adequate water for sampling. Therefore, no VOC results are available.

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- Sample results from wells MW-18, MW-19, MW-21, and MW-22 further define the lateral extent of the VOC plume.
- Sample results from wells MW-13B, MW-16C, MW-18C, MW-20C, MW-21 and MW-23D have provided additional data defining the vertical extent of VOC impacts.
- The downgradient lateral extent of the VOC plume attributed to the Omega site as depicted by EPA's subcontractor (Weston, 2003) appears to be commingled with VOC impacts from other downgradient sources (CH2M Hill, 10/5/2005).
- Perchlorate was identified in most of the wells that were sampled (not found in MW-20C) at concentrations ranging from 1.11 to 8.19 µg/L. The State of California has a proposed MCL of 6 µg/L for perchlorate. The distribution of this compound indicates that there are likely sources other than the Omega facility.
- The compound 1,4-dioxane was identified in approximately half of the wells that
 were sampled at concentrations ranging from 0.96 to 65 μg/L. California
 Department of Health Services (DHS) has issued a 1,4-dioxane advisory action
 level of 3 μg/L. This concentration was exceeded in wells MW-14, MW-15, MW17A, MW-20A and MW-20B. The distribution of this compound indicates that there
 are likely sources other than the Omega facility.
- The distribution of contaminants identified during this investigation is not consistent
 with a single source at the former Omega Chemical site. Overall, sample results
 indicate a commingled, regional groundwater plume originating from multiple
 sources.

In summary, OSVOG has completed implementation of the scope of work associated with the First Amended UAO. OSVOG prepared a RIPW, HASP, FSP and QAPP. Consistent with the EPA approved FSP, 23 groundwater monitoring wells and one groundwater extraction well were installed and developed. Monitoring wells exhibiting adequate flow were equipped with dedicated sampling pumps, and groundwater sampling was conducted. This report summarizes these activities and provides the results of the groundwater monitoring.

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Omega Chemical Operable Unit 2, Whittier, CA

1. Introduction

This Project Completion Report has been prepared on behalf of the Omega Small Volume Group (OSVOG) in response to the United States Environmental Protection Agency's (EPA) First Amended Unilateral Administrative Order (First Amended UAO) for Response Action (EPA Region IX, Comprehensive Environmental Response, Compensation and Liability Act [CERCLA] Docket No. 9-2004-0004).

In January 2004, the EPA issued a UAO (UAO 9-2004-0004; the 2004 UAO or UAO) to certain potentially responsible parties that had not signed the Partial Consent Decree to perform Remedial Investigation/Feasibility Study (RI/FS) work. The Statement of Work (SOW) attached to the 2004 UAO included the preparation of a Remedial Investigation Work Plan (RIWP), a Sampling Analysis Plan (SAP), a Site Health and Safety Plan (HASP), and a Community Relations Plan. Further, the SOW directed the installation and sampling of eight triple-nested groundwater monitoring wells to assist in defining the vertical and lateral extent of contamination in groundwater downgradient of the former Omega facility. The SOW also included the installation of a groundwater extraction well, the performance of an aquifer pumping test and slug testing to evaluate aquifer properties; and the preparation of a Project Completion Report.

The 2004 UAO was amended in June 2004 (herein referred to as the First Amended UAO). Fifteen of the parties named in the First Amended UAO, known as the OSVOG, retained ARCADIS to perform consultant (and field) services to comply with the First Amended UAO. The SOW attached to the First Amended UAO included the installation and sampling nine individual groundwater monitoring wells (Monitoring Well MW-12, MW-13, MW-14, MW-15, MW-16, MW-18, MW-19, MW-21 and MW-22) and two triplenested groundwater monitoring wells (MW-17 and MW-20) downgradient of the former Omega facility; the installation of one extraction well; the performance of one round of groundwater monitoring, and the preparation of a Project Completion Report.

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The final scope of work directed by EPA included the installation of 23 groundwater monitoring wells in 12 locations, the installation of one groundwater extraction well, the development of the wells, installation of dedicated bladder pumps in the groundwater monitoring wells, and the sampling of the groundwater monitoring wells. This report documents the procedures followed and results of the implementation the FSP and the modified scope of work.

1.1 Objectives

The objectives of the field investigation as identified in the RIWP were to install the monitoring wells and an extraction well to further characterize the nature and extent of contamination and to characterize the site hydrogeology, and to perform one round of groundwater monitoring from the newly installed monitoring wells in accordance with the First Amended UAO.

1.2 Report Organization

The remainder of the report is organized as follows:

- Section 2 Presents site background information;
- Section 3 Discusses the study area investigation and summarizes associated field activities;
- Section 4 Presents findings;
- Section 5 Discusses data usability and Data Quality Objectives (DQOs), provides a discussion of the quality assurance/quality control (QA/QC) program, and presents an evaluation of the data quality;
- Section 6 Discusses physical and chemical information collected during the field activities: and
- Section 7 Contains the conclusions made after a review of the physical and chemical results.

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2. Background

2.1 Site History

The former Omega Chemical Corporation (Omega) Facility was a refrigerant/solvent recycling operation located at 12504 and 12512 East Whittier Boulevard in Whittier, California (Figures 1, 2 and 3). The facility operated as a Resource Conservation and Recovery Act solvent and refrigerant recycling and treatment facility from approximately 1976 to 1991, handling primarily chlorinated hydrocarbons and chlorofluorocarbons. Drums and bulk loads of waste solvents and chemicals from various industrial activities were sent to the facility for processing. Wastes generated included distillation column (still) bottoms, aqueous fractions, and waste solvents. Additional site history and past investigation and remediation activities are discussed in the Final On-Site Soils Remedial Investigation/Feasibility (RI/FS) Study Work Plan (Camp Dresser & McKee [CDM], 2003a) and the former Omega Chemical Superfund Site; Whittier, California, Phase 2 Groundwater Characterization Study Report (Weston Solutions, Inc. [Weston], 2003).

Site chemicals of concern (COCs) in soil and groundwater include the volatile organic compounds (VOCs) tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), chloroform, trichlorofluoromethane (Freon 11) and trichlorotrifluoroethane (Freon 113). In addition to the VOCs, elevated total chromium has also been reported in groundwater. Elevated groundwater COC concentrations have been documented west and southwest of the former Omega facility. At least six other potential COC sources have been identified downgradient of the site (Weston, 2003).

EPA has divided the former Omega Chemical Superfund Site into two Operable Units: OU-1 and OU-2. OU-1 includes the former Omega Chemical Facility, and OU-2 includes the VOC plume that is believed to have originated from the former disposal facility. The work performed as part of this effort is associated with the OU-2.

2.2 Site Setting

The former facility is located along the base of the La Habra piedmont slope descending from the southwestern flank of the Puente Hills, at an elevation of approximately 220 feet above mean sea level (msl) (Weston, 2003). The piedmont slope descends toward the southwest (and the axis of the La Habra Syncline) at a slope of approximately 2.5 percent to an area approximately 2,800 feet southwest of the former Omega Chemical Facility. In this area, the ground surface flattens into a broad basin or plain, at an elevation of approximately 150 to 155 feet msl. In the

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southwestern part of the study area, the ground surface ascends a low rise at the northwest end of the Santa Fe Springs plain (towards the axis of the Santa Fe Springs anticline), at an approximate elevation of 160 feet msl (Weston, 2003). The site and surrounding areas are developed. The Sorenson Avenue drain, shown on Figure 1, is a small concrete-lined drainage channel that flows southeast from the intersection of Dice Road and Slauson Avenue and becomes La Cañada Verde Creek to the south of the OU-2 study area (Weston, 2003).

2.3 Hydrogeology

This section summarizes the regional and site hydrogeology.

2.3.1 Regional Hydrogeology

OU-2 straddles the contact between the Whittier Area and the Montebello Forebay in the Central Basin of the Coastal Plain of Los Angeles County. The Coastal Plain is bounded on the west and south by the Pacific Ocean and by mountains on the north, east, and southeast. The Coastal Plain is underlain by an extensive groundwater basin in Los Angeles and Orange Counties.

Water-bearing sediments identified in the Whittier area extend to an approximate depth of at least 1,000 feet below ground surface (bgs). The identified geologic units consist of recent alluvium, the upper Pleistocene Lakewood Formation and the lower Pleistocene San Pedro Formation. Figure 4 shows a generalized stratigraphic column of water-bearing sediments in the Whittier area. The Pliocene and Miocene marine sediments below the San Pedro Formation generally contain saline water in the Whittier area, although locally can contain fresh water. These units are considered non-water-bearing where exposed in the Puente Hills and include the Pliocene Pico and Repetto Formations and the Upper Miocene Puente Formation.

The major geologic structures in the area include a homocline that underlies the La Habra piedmont slope, the northwest-trending La Habra syncline underlying the alluvial basin, and the west-northwest trending Santa Fe Springs anticline situated below the slightly uplifted Santa Fe Springs plain. The La Habra syncline affects the San Pedro Formation and, to a lesser extent, the Lakewood Formation, and has a surface expression at the axis of the basin. The Santa Fe Springs anticline folds both the San Pedro and Lakewood Formations; shallow aquifers thin across the crest of the anticline. The west-northwest trending Whittier fault is located northeast of the site in the Puente Hills (California Department of Water Resources [CDWR], 1961).

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As reported by CDWR (1961), the uppermost unit in the vicinity of the former Omega site consists of the "Bellflower Aquiclude." The Bellflower Aquiclude comprises all the fine-grained sediments that extend from the ground surface down to the first aquifer. The Bellflower Aquiclude consists primarily of clay and sandy clay to silt, and ranges from 20 to more than 40 feet in thickness in this area. CDWR (1961) considers the Bellflower Aquiclude to be present in both the recent alluvium and the upper part of the Lakewood Formation. In the Whittier area, the Bellflower Aquiclude is considered to be entirely within the Lakewood Formation. Water-bearing zones locally occurring within the Bellflower Aquiclude are referred to collectively and informally as the Semi-perched Aquifer.

The Lakewood Formation consists of non-marine deposits of Late Pleistocene age and attains a maximum thickness of 70 feet. The Gage Aquifer is the major water-bearing member and comprises the basal lithologic unit of the Lakewood Formation. It consists of about 30 feet of sand with some interbedded clay. Based on previous investigations at the former Omega site, the Gage Aquifer appears to be absent beneath the site proper. A sand interval found in exploratory borings a short distance southwest of the site is believed to correlate with the Gage Aquifer (England and Hargis, 1996). The Gage Aquifer is interpreted by CDWR (1961) to extend eastward approximately 2.5 miles south of the site. However, exploratory borings suggest the Gage is present west of the former Omega site, but pinches out or disappears toward the east. The Gage Aquifer does not appear to be an important source of drinking water in the Whittier area, based on elevated total dissolved solids (TDS) concentrations observed during sampling, and none of the local water supply wells produce water from this aquifer.

Underlying the Lakewood Formation are primarily marine sand and gravels with interbedded clay, assigned to the San Pedro Formation. The San Pedro Formation reaches a maximum thickness of 850 feet and extends to a depth of about 920 feet. The San Pedro Formation unconformably underlies the Lakewood Formation. The San Pedro Formation has been subdivided into five named aquifers separated by clay members. A fine-grained layer is also typically present at the top of the sequence, although in localized areas, the uppermost San Pedro Formation aquifer may be merged with the overlying aquifer, and one or more of the five aquifers may also be merged (CDWR, 1961). This suggests that the Gage sand unit could directly overlie, and be in hydraulic connection with, San Pedro Formation aquifers in the vicinity of the former Omega site. Subsurface explorations conducted near the site to date, however, have identified clays underlying the suspected Gage-equivalent sand unit.

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The five aquifers defined within the San Pedro Formation include, from top to bottom, the Hollydale, Jefferson, Lynwood, Silverado, and Sunnyside. The upper two aquifers are less extensive and appear to be absent in the immediate vicinity of the former Omega site.

The San Pedro aquifers consist of varying amounts of sand and gravel with some interbedded clay. The thickness of the aquifers increases with depth. The shallow Hollydale Aquifer ranges from 10 to 25 feet, whereas the deepest Sunnyside Aquifer ranges from 200 to 300 feet. The base of the Sunnyside Aquifer reaches a maximum depth of about 1,000 feet bgs (CDWR, 1961). The San Pedro Formation aquifers are the primary source of water for the production wells in the area. The Pliocene and Miocene sediments below the San Pedro Formation generally contain saline water in the area, but locally contain freshwater (CDWR, 1961).

Based on a records search by England-Hargis (1996), there are six water supply wells within 1.5 miles of the site. The nearest well, Well No. 02S/11W30-R3, also known as

Redacted, FX9: WELLS

that are tapped by SFS#1 are believed to include the Silverado and Sunnyside Aquifers, which occur within the lower part of the Lower Pleistocene San Pedro Formation. In several years of monitoring SFS#1, low concentrations of chlorinated hydrocarbons (including TCE, chloroform, and PCE) have occasionally been detected. Most recently (in February 2003), only TCE at a concentration of 0.64 microgram per liter (μ g/L) was reported above the method detection limit (MDL). Hexavalent chromium was reported at a concentration of 2.6 μ g/L. The depth interval(s) from which the contamination is entering the well has not been established. The production rate of SFS#1 ranges up to approximately 1,250 gallons per minute (England and Hargis, 1996). It is not established what effect well SFS#1 has on local groundwater flow direction and contaminant migration; shallow groundwater in the vicinity of the well appears to flow toward the south, unaffected by pumping from SFS#1 (Weston, 2003).

The Los Nietos water supply well (Well No. 02S/11W30-Q5) is located about 1.5 miles southwest of the site (about 1,500 feet west-northwest of SFS#1). This well is screened from 152 to 370 feet bgs. PCE and TCE were detected at unknown concentrations from 1986 through 1990 (Weston, 2003). The well locations are shown on Figure 2.

The remaining wells (Well Nos. 2S/11W-29E5, 2S/11W-32G3, 2S/11W-33M1, and 2S/11W-32J4) are no longer operating, were used for irrigation, no water-quality data were available, or their exact locations are unknown (Weston, 2003).

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2.3.2 Site Hydrogeology

The hydrogeology of the former Omega site has been explored with soil borings and cone penetrometer testing (CPT). The former Omega site is underlain by relatively low permeability silty and clayey soils to a depth of about 120 feet bgs. A sand unit, which may correlate with the Gage Aquifer, has been encountered approximately 600 feet southwest of the site beneath Putnam Street. Groundwater at OU-1 generally occurs at a depth of approximately 70 feet bgs. The depth to groundwater ranges between 40 and 70 feet over OU-2. Consistent with information presented in the (CDWR) Bulletin 104 (CDWR 1961), local groundwater flow appears to be generally towards the southwest. CDM of Irvine, California reported a local direction of groundwater flow toward the southwest with a hydraulic gradient of 0.009 foot per feet. (ft/ft) (CDM, 1999). The hydraulic conductivity of the upper silty unit was estimated from step-drawdown tests conducted in Monitoring Well OW2 and a slug test at Monitoring Well OW1. CDM reported that the hydraulic conductivity in this area ranged from 0.8 to 1.6 feet per day (CDM, 2003b).

A description of hydraulic units believed to have been encountered during drilling activities is provided in Section 4.1.

3. Study Area Investigation

The following sections summarize the field activities and findings associated with the implementation of the RIWP and FSP.

3.1 Health & Safety Plan

In accordance with ARCADIS' Health and Safety protocol, and 29 Code of Federal Regulations 1910, and the California Occupational Safety and Health Administration, ARCADIS prepared a HASP for the project. The HASP was included in ARCADIS' RIWP (2004a).

Each morning of field activities, the on-site ARCADIS field safety officer conducted a tailgate safety meeting. Upon completion of the tailgate safety meeting, all personnel on site, including subcontractors, signed Tailgate Safety Briefing Sign-in Log. Copies of these logs are retained in the project file.

3.2 Weekly Status Reports

Weekly status reports were prepared and submitted to EPA during implementation of field activities. Copies of status reports are attached as Appendix A. These reports

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were utilized to keep EPA appraised of project progress as well as issues that required resolution.

In addition, frequent communications occurred between OSVOG's contractor ARCADIS, EPA's contractor, CH2M Hill, and EPA as work progressed or as issues arose in the field. These communications were in person, by phone, and by e-mail.

3.3 Permits

Well installation permits were applied for in accordance with Los Angeles County Department of Health Services (DHS) permit requirements. Copies of these permits are included in Appendix B In addition, excavation permits and encroachment permits were obtained from the Cities of Santa Fe Springs and Whittier. Copies of these permits are also included in Appendix B.

3.4 Borehole Clearance

In accordance with California Code of Regulations, Sections 4216 to 4216.9, ARCADIS called the Underground Service Alert (USA) at least 48 hours prior to drilling at each well location. USA notifications were updated as necessary until all wells were installed. Upon notification, USA contacted its associated members to identify their underground utilities in the area of excavation.

As further precaution, ARCADIS contracted with an underground utilities locator (Spectrum Geophysics of Los Angeles, California) to locate possible underground utilities within a 10-foot radius of the proposed well locations that might not have been marked by USA members. In addition, physical clearance of underground utilities was performed by air kniffing each well location to a depth of approximately 8 feet bgs and to at least 12 inches in diameter (the maximum borehole diameter). Air knifing, an excavation process using high-pressured air to loosen soil, and a vacuum to remove the loosened soil, was performed by Well Development Corporation (WDC). This method allows for the excavation of a limited area while minimizing potential damage to underground utilities. Upon completion of air knifing, the removed soil was placed back in the hole and compacted pending drilling activities.

Where borings were unavoidably located near underground utility lines (e.g., MW-20 and MW-21), a steel casing was manually inserted between the utility lines to 10 feet bgs as a safe conduit for drilling.

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3.5 Well Installation

3.5.1 Well Location

Wells MW-12 through MW-23 and EW-1 were installed in accordance with ARCADIS' EPA-approved FSP and in accordance with further correspondence with EPA and their oversight contractor CH2M Hill. Well locations are shown on Figure 2, and Well Location Maps are included in Appendix C. Wells installed at locations different from those proposed in the FSP include:

- Well MW-13. This well was originally proposed to be located on private property, approximately 500 feet southwest of the intersection of Putnam Street and Pacific Street. Due to access agreement issues, the well was moved to Putnam Street, in front of the Fred Rippey facility at 12412 Putnam Street, approximately 270 feet south-southeast of the intersection with Pacific Street (approximately 457 feet east of the original location).
- Well MW-14. This well was originally proposed to be located in the west-bound right lane of Washington Boulevard, approximately 250 feet west of the intersection with Lambert Road, in front of the Presbyterian Intercommunity Hospital. Due to excessive underground utilities in the area, the well location was moved (with the approval of EPA) to the east-bound right lane of Washington Boulevard in front of Unit F of 12300 Washington Boulevard. Due to drilling restrictions and work-time restrictions imposed by the City, as well as traffic safety issues, the well location was again moved with EPA concurrence to the parking lot of the Presbyterian Intercommunity Hospital located at the northwest corner of the intersection of Washington Boulevard and Lambert Road (approximately 240 feet east-northeast of the original location).
- Well MW-15. This well was originally located on private property, in the driveway between two industrial buildings, approximately midway between Byron Road and Chetle Avenue, south of Riviera Road. Due to access agreement issues, this well was moved approximately 735 feet southwest (downgradient), to the area in front of 8550A Chetle Avenue.
- Well MW-16. This well was originally located on Altamar Place, approximately 310 feet southeast of Dice Road. Due to excessive underground utilities in the area, the well was moved to a location approximately 480 feet north-northwest, in front of 9028 Dice Road.
- Well MW-18. At the request of EPA (January 5, 2005), Well MW-18 was moved from its original location in the northeast-bound right lane of Santa Fe Springs

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Road, just northeast of the intersection with Los Nietos Road, to a location in the northeast-bound right lane of Santa Fe Springs Road, just southwest of the intersection with Ann Street. Due to high volume of truck traffic in this area and the presence of a significant number of underground utility lines, the well was moved to Ann Street, approximately 130 feet southeast of the intersection with Santa Fe Springs Road (approximately 180 feet east of the revised location).

- Well MW-20. This well was originally located approximately midway along the west property line of the oil field on east side of Geary Avenue. At the request of the property owner, and with the approval of EPA, the well was moved to approximately 10 feet south of the north property line of the oil field property (approximately 260 feet north of the original location).
- Well MW-21. This well was originally located on Hamden Street, approximately 250 feet east of Pioneer Boulevard. The City of Santa Fe Springs does not permit the installation of wells in the streets. Due to limited space on the sidewalk at the original location, and the presence of underground utilities, the well was moved to the sidewalk on the west side of Pioneer Boulevard, in front of 9929 Pioneer Boulevard (approximately 310 feet west-northwest of the original location).
- Well MW-22. This well was originally located on Arlee Street at the intersection of Fredson Street, a residential area. Given the restrictions of drilling in the street, imposed by the City of Santa Fe Springs and with the approval of EPA, this well was moved to the greenbelt on the east side of Arlee Street at the intersection of Terradell Street, approximately 800 south of the original well location.
- Well EW-1. This well, at the request of CH2M Hill and EPA, was moved approximately 40 feet west, to a location approximately midway between wells MW-08A and MW-8D.

3.5.2 Cone Penetrometer Testing and Sampling

In accordance with the approved FSP, ARCADIS contracted Gregg Drilling, Inc. of Signal Hill, California (GDI) to advance CPT borings at proposed well locations MW-19, MW-20, MW-21 and MW-22. The purpose of the CPT borings was to collect groundwater data at these locations in an attempt to refine the proposed well locations at the leading edge of the plume. The CPT protocol included continuous penetration testing to collect lithologic data and pore pressure dissipation tests to identify water bearing zones and collect hydraulic head data. EPA had specified, in discussions with ARCADIS, that concentrations of TCE and PCE between the MDL and the California Maximum Contaminant Level (MCL) would define the leading edge of the plume.

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On August 5, 2005, GDI advanced a CPT boring at MW-19, and encountered refusal at 73 feet bgs. Pore-pressure dissipation tests were performed at 5-feet intervals from 60 feet bgs. Groundwater was not encountered. A second attempt was made at the same location, with similar results. CPT logs suggested the refusal occurred in a formation of cemented sand. GDI advanced a CPT boring at the proposed MW-22 location. Refusal was encountered at approximately 45 feet bgs. Groundwater was not encountered. ARCADIS reported the failed CPT attempts to EPA and CH2M Hill and, after consultation, abandoned further attempts to advance CPT borings.

3.5.3 Advancement of Well Boreholes

Installation of groundwater monitoring wells was performed using Air Rotary Casing Hammer (ARCH), Sonic, and Mud Rotary drilling techniques. The drilling method used for each of the wells is noted on Table 1.

3.5.3.1 ARCH Drilling

The ARCH method consists of a single drive casing advanced by a percussion hammer. Compressed air is circulated down the drill stem and up within the annular space between the drill stem and drive casing (direct air circulation). Drill cuttings are discharged into a cyclone separator. Drilling mud is not required to keep the borehole open. The borehole remains sealed by the drive casing during drilling. Potential effects on the groundwater around the borehole will be minimized by thorough well development. One major advantage of the ARCH method is that the drill rig can be converted to mud-rotary drilling if flowing sands are encountered.

Well MW-23 was initially started using the ARCH drilling method, however, due to heaving sand conditions, the drilling technique was re-evaluated and, with EPA concurrence the drilling was completed utilizing the mud rotary technique to complete this well.

3.5.3.2 Sonic Drilling

The sonic drilling technology employs the use of high-frequency mechanical vibration to advance the drill-string through unconsolidated, and to a limited extent, consolidated materials. The sonic drill rig uses an oscillator, or head, with eccentric weights driven by hydraulic motors, to generate high sinusoidal force in a rotating drill pipe. The frequency of vibration of the core bit can be varied to allow optimum penetration of subsurface materials. Sonic drilling can use water as a drilling fluid, if required.

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Drilling is conducted using an inner casing (core barrel) equipped with a cutting shoe, followed by an outer casing. There are three types of cutting shoe: one that pushes the soil to toward the borehole wall; one that centralizes the soil into the core barrel; and, one that is midrange. Either the midrange cutting shoe or the one that centralizes the soil is used. When installing a 2-inch well, a 4-inch diameter inner core barrel and a 6-inch diameter outside casing are used. The core barrel advances 10 feet into the subsurface, followed by the outer casing. The core barrel is then removed from the borehole and the soil is sampled and bagged for preservation or for disposal. The core barrel is placed back into the borehole and pushed another 10 feet. An additional 10 feet length of outer casing is added to the outer casing that is in the ground and is advanced to meet the bottom of the core barrel. This process is continued until the total depth is reached. Sonic drilling does not produce cuttings, but may generate investigation derived waste water.

Wells MW-12, MW-14, MW-15, MW-19, MW-21, and MW-22 (single-cased wells) were installed with sonic drilling. Generally, wells installed during the implementation of the FSP did not require the use of water as a drilling fluid.

3.5.3.3 Mud-Rotary Drilling

Drilling mud may be used during construction of the deeper monitoring wells or where borehole instability is encountered during drilling of the shallow and intermediate wells. Typically, mud-rotary methods are implemented to minimize borehole collapse and to assist in evacuating drill cuttings from the boreholes. Drilling mud also helps to reduce the possibility of cross contamination between groundwater zones, because it continuously invades the formation along the borehole walls and forms a low-permeability mud cake.

Drilling mud consisted of bentonite and water. The viscosity and density of the drilling mud were tested periodically and maintained within the limits specified by the site hydrogeologist or engineer. Drilling mud was forced down the drill pipe and out through ports in the drill bit utilizing the minimum quantity of mud required to evacuate drill cuttings from the borehole.

Wells MW-13, MW-16, MW-17, MW-18, MW-20, MW-23, and EW-1 were installed using mud rotary.

3.5.4 Depth-Specific Water Sampling

In accordance with the UAO and approved FSP, groundwater and/or soil samples were collected at discrete depths, during installation of the boreholes for the

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monitoring wells. The groundwater samples were collected and analyzed to help evaluate target well intervals within the contaminated zone. During drilling operations, WDC collected discrete soil and water samples using a Maxiprobe Simulprobe® Sampling System (Simulprobe). The purpose of the Simulprobe is to collect soil samples concurrently with groundwater. Simulprobe sampling was performed at 10-foot intervals in coarse materials, from first encountered groundwater.

The Simulprobe consists of three primary sections: the cutting shoe and screen-coupling assembly; the soil core barrel; and, the water storage canister. Together, the Simulprobe is approximately 4 feet long, and is 3.38 inches in outside diameter.

Prior to assembly, all parts of the Simulprobe were washed with a non-phosphate detergent (Alconox) and triple rinsed. Prior to sampling, the Simulprobe was assembled and lowered to the bottom of the borehole. The Simulprobe was then pounded approximately two to three feet into the soil, allowing for the collection of a soil sample and positioning the device for collection of a groundwater sample.

The collected water was then drained into appropriate sample containers (40-milliliter [ml] volatile organic analysis [VOA] vials preserved with hydrochloric acid [HCl]) and the soil sample was inspected by the on-site geologist.

For QC purposes, one equipment blank was collected from the Simulprobe water canister on each day depth-discrete water sampling was performed.

3.5.5 Geophysical Logging

Geophysical well logging methods measure physical and chemical properties of formations and fluids in or around the vicinity of the well. The data provided consists of a series of curves plotted on a graph showing changes in the properties with depth. These graphs provide an evaluation of stratigraphy, borehole diameter, and, in some cases, water-bearing zones that often assists in determining screen placement for well construction.

Geophysical well logging of the well bores drilled using mud rotary (MW-13, MW-16, MW-17, MW-18, MW-20 and MW-23) was performed by Pacific Surveys of Claremont, California (Pacific Surveys). Methods used included electronic logging (E-Log), Laterolog 3 resistivity logging, gamma-ray logging, caliper and dual-induction logging. Copies of the geophysical logs are included in Appendix D.

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With the exception of well MW-23, geophysical logging was performed upon reaching the planned total depth of the well, or an extended depth (based on depth-specific water samples), prior to well construction. A dual-induction log was performed in well MW-23D after construction of the well. The dual induction method was used in this well after construction because steel conductor casing had been driven to approximately 140 feet bgs during ARCH drilling, making the other geophysical methods ineffective.

E-Logs incorporated four separate measurements: spontaneous potential (SP), short normal resistivity (SNR 16-inch normal), long normal resistivity (LNR 64-inch normal) and single point resistance (Point).

SP logs record potentials or voltages developed between the borehole fluid and the surrounding rock and fluids. SP logs can be used in the evaluation of lithology and water quality. Collection of SP logs is limited to water- or mud-filled open holes.

SNR and LNR logs record the electrical resistivity of the borehole environment and surrounding rocks and water as measured by variably spaced potential electrodes on the logging probe. Typical spacing for potential electrodes is 16 inches for SNR and 64 inches for LNR. Normal-resistivity logs are affected by bed thickness, borehole diameter, and borehole fluid, and can only be collected in water- or mud-filled open holes.

SP logs record the electrical resistance from points within the borehole. In general, resistance increases with increasing grain size and decreases with increasing borehole diameter, fracture density, and dissolved-solids concentration of the water. SP resistance logs are useful in the determination of lithology, water quality, and location of fracture zones.

Laterolog 3 resistivity logging records the electrical resistivity of the borehole and surrounding formation and water with a focused beam of electrical current. This provides a higher resolution of the contacts between soil layers than that provided by the SP, SNR and LNR logs.

Gamma-ray logs record the amount of natural gamma radiation emitted by the rocks surrounding the borehole. The most significant naturally occurring sources of gamma radiation are potassium-40 and daughter products of the uranium- and thorium-decay series. Clay- and shale-bearing rocks commonly emit relatively high gamma radiation because they include weathering products of potassium feldspar and mica and tend to concentrate uranium and thorium by ion absorption and exchange.

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Caliper logs record borehole diameter using three arms. Changes in borehole diameter are related to well construction, such as casing or drilling-bit size, and to fracturing or caving along the borehole wall. Because borehole diameter commonly affects other geophysical-logging method responses, the caliper log is useful in the analysis of other geophysical-logs. In addition, caliper data can be used to evaluate washout areas, and to provide total and annular volumes for gravel and cement volume calculation.

At well MW-23, Pacific Surveys employed a dual induction instrument. This instrument records medium and deep focused conductivity measurements. Typically, dual induction tools also include a shallow reading focused tool (e.g., a laterolog), and an SP log. The dual induction instrument provides excellent bed definition in air or mud filled boreholes, and can be used in polyvinyl chloride (PVC) cased wells.

3.5.6 Well Construction

With the exception of well EW-1, wells were constructed of two-inch diameter, Schedule 80 blank and slotted PVC screen. The general structure of the wells consisted of blank pipe, a 10 or 15-foot screened section, followed by a five-foot blank sump equipped with a threaded end cap. Well EW-1 was constructed of four-inch diameter Schedule 80 PVC.

The well screen intervals were selected based on the results of discrete depth groundwater sampling during drilling, on observations of materials in the soil column, and on results of the geophysical logging. Proposed well construction details were prepared in consultation with EPA's field activities oversight consultant CH2M Hill personnel prior to implementation. As a general rule, screens were placed at the depth interval in each zone with the highest contaminant concentration was screened. Well construction details are summarized in Table 1.

Screen filter pack material was determined based on the formation observed in the proposed screen zone: the granular size of the filter pack was estimated to be similar in size to observed materials. The slot size of the casing was evaluated to retain at least 90 percent of the filter pack material. The filter pack was tremmie-piped to the bottom of the hole while measuring its placement with a down-hole measuring tape, and extended approximately two feet above the screened interval. The screened interval of the well was then surged prior to placement of transition sand.

Approximately one foot of transition sand was placed on top of the filter pack. For nested wells, a one-to-one mix of bentonite crumble and Number 3 Sand was placed from the top of the transition sand to approximately two feet below the next screened interval. After placement of the filter pack and transition sand for the shallowest-

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screened interval of the wells, a two-foot thick layer of medium bentonite chips was emplaced. A 95-percent cement, five-percent Benseal®, slurry was used as an annular seal to ground surface. The top of the well casings were then enclosed in traffic-rated well boxes set in concrete.

Well construction diagrams are shown on boring logs in Appendix D.

3.6 Well Development

The goal of well development is to improve hydraulic communication between the geologic formation and the well. Hydraulic communication may be degraded when clay and silt in the formation (or in fractures), and/or when drilling muds, are smeared on the borehole wall during the drilling process. Well development improves hydraulic communication by eliminating or reducing this smear. Development also improves the filtering action of filter pack that surrounds the well casing. Well development removes fine sediments along the contact between the well screen and the formation, and some distance into the formation.

Well development was performed by WDC using a combination of techniques including surge-and-bail, air lifting, swabbing, and pumping. The wells were developed until temperature, conductivity, and pH parameters stabilized, and until the turbidity of the water decreased below 10 nephelometric turbidity units (NTUs). Purge water was placed in a water trailer, and later transferred to on-site storage bins pending profile and disposal. A discussion on waste disposal is presented in Section 3.11 of this report. Well development logs are included in Appendix E.

3.6.1 Pump and Surge

Upon completion of air lifting procedures, a Grundfos Rediflow pump was lowered down the well to the top of the well screen. The pump was turned on and extracted water was monitored for pH, conductivity, temperature and turbidity approximately once every 5 to 10 minutes. The pump was lowered when the turbidity of the well screen being pumped decreased to below 10 NTUs. This process was repeated until the entire screened section was developed. Similar to the air-lifting method, the pump was periodically turned off to allow the water column to fall, surging the well.

3.6.2 Bail and Surge

A bail and surge methodology was used in wells that were too turbid to pump and did not contain sufficient water column to air lift (MW-17A, MW-19). A surge block was repeatedly lowered and raised across the well screen to create a surging action,

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loosening the finer particulates and pulling them into the well. A bailer was then lowered down the well to remove the accumulated sediment in the well.

3.6.3 Air Lifting

In some cases air lifting was used to help develop the wells. With this method, compressed air is injected into the well and the air lifts water and sediment to the surface. Air lifting was performed by placing a 1-inch diameter galvanized steel pipe, equipped with a brush, to the bottom of the well. The top of the pipe extended above the top of the well casing. A T-pipe extension with a two-inch-to-one-inch reduction was installed onto the top of the well casing, sealing the top of the well and the air-injection line. A discharge line was attached to the T. Air was then injected via the 1-inch diameter pipe. The turbulence resulting from the injection, combined with the brushing, worked to dislodge particulates from the sand pack, adjacent formation, and the inside of the well casing.

The injection of air into the water reduces the density of the water column, causing it to rise to the ground surface. The water rises in the well (around the injection pipe), up the extension pipe, out the discharge line, and into either a bin or into the water trailer tank. When the turbidity of the water is reduced to less than 10 NTUs, the air-injection pipe is lowered 5 feet down the well screen and the process is repeated. Periodically during the air lifting of a section of well screen, the air compressor is shut off, and the water in the well falls, thereby surging the well screen. This process is repeated (air lifting and surging) until the entire screened interval and underlying sump have been cleaned out.

3.7 XYZ Surveying

The well locations (latitude and longitude) and top-of-casing elevations were surveyed by Calvada Land Surveyors. The latitude/longitudinal coordinates for the wells were based on the North American Datum 1983 datum, using the National Geodetic Survey Point DV0238. In addition, the top of rim, natural ground surface (or finished surface) elevations were also recorded. Surveys of the wells were performed on August 5, 2005, June 14, 2006, and June 24, 2006. Survey data is included in Appendix F.

3.8 Dedicated Pump Installation

Dedicated bladder pumps, manufactured by QED Environmental Systems (QED), were installed in all wells with the exception of wells MW-13A, MW-17A and MW-19. Well MW-13A is dry. Wells MW-17A and MW-19 have limited water in the screened portion of the well, and have significantly low recharge rates. A general description of the bladder pumps installed is provided below. Design details are included in Appendix G.

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Two types of pump setups were used: Well System A and Well System L. Well System A pumps include a QED Model T1200M bladder pump equipped with a bottom-attached pump inlet screen. The pump body is constructed of stainless steel. Premeasured and cut polyethylene tubing is attached to each pump for air injection and water discharge. The tubing is attached to male nipples on a recessed well cup (which sits inside the well casing). All tubing attachments are tested by the manufacturer for tightness. Pumps were installed using System A in wells MW-12, MW-13B, MW-14, MW-15, MW-16A, MW-16B, MW-17B, MW-18A, MW-18B, MW-20A, MW-20B, MW-21, MW-22, and MW-23B.

Well System L uses a similar setup with one exception – the pump inlet is attached to the bottom of the pump via pre-measured lengths of extension tubing. This setup was used where there was over 100 feet of water column above the proposed inlet depth. Using this setup, the pump itself can be set at a shallower depth, thus requiring less gas pressure to operate. This in turn allows faster discharge rates and uses less gas. Wells equipped with System L type of pump systems include MW-16C, MW-17C, MW-18C, MW-20C, MW-23C and MW-23D.

For shallow wells, where the water table is near or within the well-screen area, the pump inlet was placed one foot above the bottom of the screen. For deeper wells, where the well screens are totally submerged, the pump inlets were placed in the center of the screened interval.

Prior to installation of the pumps, ARCADIS personnel measured the depth to water, depth to sediment (if any), and total well depths in each of the wells. The pumps were installed on June 22, 2006, under the observation and supervision of Mr. David Corder of QED.

3.9 Groundwater Sampling

Groundwater monitoring wells installed were sampled from July 6 to July 13, 2006. The groundwater monitoring wells were purged and sampled using low-flow procedures. The low flow purging and sampling setup consisted of compressed nitrogen gas cylinders, a QED MP10 controller, dedicated QED bladder pumps (previously installed), a QED MP20 Flow Cell (Flow Cell) and a dedicated discharge tube. The compressed nitrogen gas (cylinder) is used to operate the pneumatic bladder pumps. The gas is connected to a QED MP10 Pump Controller. The controller is connected to the pump. Discharge from the pump is connected to the Flow Cell via a dedicated discharge tube. A five-gallon bucket was used to contain purge water, while a second bucket was used to contain the sampling containers while collecting the samples.

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The flow cell can be used to monitor pH, temperature, conductivity, oxidation reduction potential (ORP), turbidity and dissolved oxygen (DO). Each morning, prior to sampling activities the Flow Cell was calibrated for pH and conductivity. Prior to sampling each groundwater monitoring well, the depth to water was measured with an electronic water level meter. Water levels were recorded on Low-Flow Purging Log Sheets, attached as Appendix H. The maximum allowable drawdown (DD) was then calculated based on the location of the water-air interface (depth to water [DTW]) in the well relative to the top of the well screen (TOS), and the location of the pump inlet (P).

If the water-air interface is above the TOS, the allowable DD is calculated as 25 percent of the water column between the TOS and the P.

$$DD = 0.25 \times (P-TOS)$$

If the water-air interface is below the TOS then the allowable DD is calculated as 25 percent of the water column between the water table and the P.

$$DD = 0.25 \times (P-DTW)$$

The allowable DD was then recorded on the Low Flow Purging Log Sheets.

The controller was turned on and initially set to four cycles per minute, with a 10-second recharge, a 5-second discharge rate, and an estimated discharge rate between 500 to 1,000 milliliters per minute (ml/min). The rate of discharge in ml/min was measured using a graduated 500-ml cup while the drawdown was concurrently measured. The water level in the well casing was monitored at one to two minute intervals. As a result of the nature of pneumatic pumps, the water levels in the well fluctuate between pump recharge (drop in water level) and discharge (rise in water level). Both the low and high water level readings are recorded on the field logs. If significant drawdown (0.2 to 0.3 feet per minute) in the water levels was observed, the pump flow rate was reduced until drawdown stabilized. Passive sampling (collection of the samples prior to stabilization) was performed on well MW-16A due to excessive drawdown. Although Well MW-12 was purged using low-flow techniques, even a flow rate of 100 ml/min resulted in excessive drawdown.

Once the drawdown stabilized, the Flow Cell was connected to the discharge tubing and turned on. The datalogger recorded data once every minute. Stability of field parameters is defined (by the manufacturer) as changes of less than 0.2 pH units, a change of less than 0.2 milligrams per liter (mg/L) DO, a change of less than 0.020 microsiemens per centimeter, and less than 20 millivolts in the ORP.

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When stabilization of the water parameters was achieved, sample containers were filled in accordance with the approved SAP as described in the FSP. The type and number of sample containers, as well as the preservatives used are shown in Section 3.10.

Sample containers were labeled, placed in individual sealed bags (i.e., Ziplock), recorded on a chain-of-custody form, and placed in cold storage pending delivery to a State-certified laboratory for analysis. In addition to primary samples collected from the groundwater monitoring wells, ARCADIS collected the following QC samples:

- Trip blanks one (40-ml VOA vial) per cooler used to store samples for VOC analysis.
- Field Blanks one field blank, consisting of set of three 40-ml VOA vials, was prepared for each day of sampling.
- Field Duplicates complete duplicate sample sets were collected at a rate of 10 percent of the primary samples.
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Sample one complete sample set was collected for use as a MS/MSD.

Sample names were determined using the following protocol.

Primary samples were prefixed with "OC2-", designating the sample being collected from Omega Chemical OU-2, followed by the well name, the sample type, and the sequential number of sample collected. Sample types were designated as shown below.

Sample Type	Description
0	Primary sample
1	Field Duplicate
2	Field Blank
3	Equipment Blank
4	Trip Blank
5	MS/MSD

For example, Sample OC2-PMW18A-0-22, represents a primary sample collected from well PMW18A, and was the 22nd sequential sample collected. The sample OC2-PMW15-1-20 represents a field duplicate sample collected from well PMW15.

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Trip blanks, equipment blanks, field blanks were designated by "OC2-00-W-" followed by the sample type and sequential sample number. The sample OC2-00-W-4-18 is a trip blank, and was the 18th sample collected. MS/MSD samples also were numbered using this system.

3.10 Analytical Program

Water samples were submitted to EMAX Laboratories of Torrance, California for chemical analysis. All primary samples, field duplicates and MS/MSD samples were submitted for the following analyses.

Analyte(s) to be Tested	EPA Method	Container Type and Volume (ml)	Preservative	Number of Containers
VOCs	8260B	40 ml glass	HCI	3
		VOA Vial	Cold	
1,2,3-trichloropropane	8260SIM	40 ml glass	HCI	3
(1,2,3-TCP)		VOA Vial	Cold	
Total Organic Carbon	415.1	40 ml glass	HCI	1
(TOC)		VOA Vial	Cold	
Semi-Volatile Organic	8270C	1-Liter glass	Cold	2
Compounds (SVOCs)		amber		
N-Nitrosodimethylamine	1625 Modified	1-Liter glass	Cold	2
(NDMA) ¹		amber		
1,4-dioxane	8270SIM	1-Liter glass	Cold	1
		amber		
Dissolved Metals ²	6010/7000	500-ml poly	Cold	1
Total Kjeldahl Nitrogen	351.3	500-ml poly	H₂SO₄	1
(TKN)		-	Cold	
Anions ³	300.0	250-ml poly	Cold	1
TDS ³	160.1	250-ml poly	Cold	(see note 3)
perchlorate ³	314.0	250-ml poly	Cold	(see note 3)
Hexavalent Chromium ³	218.6	250-ml poly	Cold	(see note 3)
Total Cyanide	335.2	125-ml poly	NaOH	1
			Cold	

Notes:

Deviation from originally proposed 8270C.

Includes Boron and dissolved Silica. The samples for dissolved metals were unfiltered and unpreserved in the field. Samples were filtered and preserved upon arrival at the laboratory.

³ Anions (bromide, chloride, fluoride, sulfates, Nitrogen-N, Nitrite-N), TDS, perchlorate, and hexavalent chromium were analyzed from water contained in same sample container.

HCI - hydrochloric acid.

H₂SO₄ - sulfuric acid.

NaOH - sodium hydroxide

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Trip blanks and field blanks were submitted for VOC analysis only.

3.11 Waste Disposal

Soil cuttings, mud and well-development water were placed in 18-cubic-yard, Visqueen-lined, roll-off bins equipped with locking tops. Samples of the various wastemedia were collected and submitted for profile analysis in accordance with requirements specified by the waste-disposal contractor. Profile sample analysis indicated that the waste materials were non-hazardous. Based on these results, waste-disposal contractors (Belshire Environmental and Waste Management) transported soil cuttings to TPST Soil Recyclers of California in Adelanto, drilling mud to Demenno Kerdoon in Compton, California, and water to either Demenno Kerdoon or to the Liquid Waste Management in McKittrick, California. Copies of transportation manifests are attached as Appendix I.

4. Findings

4.1 Physical Findings

Based on a comparison of materials encountered during drilling and published isopleths and isopach maps of the various hydrologic units for the Los Angeles Basin area (DWR, 1961), the following hydrologic units are believed to have been encountered during installation of wells MW-12 to MW-23: the Bellflower aquiclude, the Gaspur aquifer (northeast of and including Beasor Avenue), the Artesia aquifer (MW-20), the Gage aquifer, the Hollydale aquifer, the Jefferson aquifer, and the Lynwood aquifer. The materials observed during installation of wells MW-12 to MW-23 are consisted with the aforementioned hydrologic units identified in Section 2.3 of this report.

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18/- II NI-	Hydraulic Unit						
Well No.	Bellflower	Gaspur	Artesia	Gage	Hollydale	Jefferson	Lynwood
MW-12	X	•				0	0
MW-13A	X	0				0	0
MW-13B	Х	•				0	0
MW-14	X	•				0	0
MW-15	X	•		?	0	0	0
MW-16A	X			•	0	0	0
MW-16B	X			Х	•	0	0
MW-16C	X			X	X	•	0
MW-17A	Х	_		Х	•	0	0
MW-17B	X			Χ	•	0	0
MW-17C	X			Х	X	X	•
MW-18A	X			Χ	•	0	0
MW-18B	Х			Χ	•	0	0
MW-18C	X			Χ	X	Х	X
MW-19	Х			•	0	0	0
MW-20A	X		?	•	0	0	0
MW-20B	X		?	Х	•	0	0
MW-20C	X	_	?	Х	X	•	0
MW-21	X	Х		•	0	0	0
MW-22	Х				•	0	0
MW-23B	X			Х	•	0	0
MW-23C	X			Х	X	•	0
MW-23D	Х			X	X	X	•
EW-1	X			X	•	0	0

Source: CDWR, 1961 - Bulletin 104, boring logs.

- X indicates unit encountered
- O indicates unit present at that location but beyond the depth of the well
- indicates well is screened in the indicated unit.

During the installation of wells MW-20 and MW-21, crude-oil-affected soil was encountered at shallow depths. In well-bore PMW20, black, crude-saturated silt was encountered at depths ranging from approximately 8 to 12 feet bgs. In well-bore MW-21, crude-impacted soil was encountered from approximately 3 to 17 feet bgs. Both these wells are located within the Santa Fe Springs Former Oil Field. It is likely that crude-impacted soil encountered during drilling operations are residual soils left in place prior to development of the area.

Groundwater was encountered at various depths across the site, as shown in Table 2.

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4.2 Chemical Findings – Depth Specific Water Samples

Depth-specific water samples were collected at just beneath the first water encountered during drilling procedures, and at 10-foot intervals thereafter, where possible. The samples were collected using a Simulprobe[®] as described in Section 3.5.4 of this report. A list of depth specific water samples collected during drilling procedures (also shown on boring logs in Appendix D) is provided in Table 3. Depth-specific water samples were analyzed for VOCs only. Chemical results for the samples are summarized in Table 4. Copies of laboratory reports are attached as Appendix J. Chemical results are briefly discussed below.

 <u>MW-12:</u> One primary and one duplicate water sample were collected at approximately 102 feet bgs. The following VOCs were detected in the samples.

VOC Analyte	Depths Detected	Results/Comments
1,1-DCE	102 feet	12 μg/L and 19 μg/L
Benzene	102 feet	0.55 μg/L
Chloroform	102 feet	0.58 μg/L and 0.67 μg/L
PCE	102 feet	1.9 μg/L and 3.1 μg/L
TCE	102 feet	400 μg/L and 470 μg/L

 <u>MW-13:</u> One primary and one duplicate water sample were collected at approximately 127 feet bgs. Only PCE was detected as noted below.

VOC Analyte	Depths Detected	Results/Comments
PCE	127 feet	.9 μg/L for both primary and duplicate

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 <u>MW-14:</u> Three primary water samples were collected at this location, at approximately 57, 67, and 77 feet bgs. The following table summarizes the findings.

V00 A 1 /	B. H. B. G. de de	D 11 /0
VOC Analyte	Depths Detected	Results/Comment
1,1-dichloroethane (DCA)	57 feet	0.38 µg/L.
1,1-DCE	57, 67, and 77 feet	0.68 to 110 µg/L. Maximum concentration at 57 feet bgs, decreased with depth to 34 µg/L at 77 feet bgs.
1,2,4-trimethylbenzene (TMB)	67 and 77 feet	0.24J to 2.6 μg/L. Maximum concentration at 67 feet bgs, decreased with depth to 0.24J μg/L at 77 feet bgs.
1,2-DCA	57 and 77 feet	Maximum concentration, 1.2 μg/L at 57 feet bgs, decreased with depth to not detected at 67 feet bgs, and increases to 0.90 μg/L (below MCLs) at 77 feet bgs.
1,3,5-TMB	67 feet	0.20 µg/L at 67 feet – decreased with depth to not detected at 77 feet bgs.
Benzene	57 feet	0.17 µg/L at 57 feet bgs – decreased with depth to not detected at 67 feet bgs.
Bromodichloromethane	67 and 77 feet	2.4 μg/L at 67, decreased with depth to 0.55 μg/L at 77 feet bgs.
Bromoform	67 and 77 feet	13 μg/L at 67, decreased with depth to 2.3 μg/L at 77 feet bgs.
Chloroform	57, 67, and 77 feet	2.3 µg/L at 57 feet bgs, decreased with depth to 0.46 µg/L at 67 feet, and increases to a maximum of 8.3 µg/L at 77 feet bgs.
cis-1,2-DCE	57 and 77 feet	1.2 µg/L at 57 feet bgs, decreased with depth to not detected at 67 feet, and increases to 0.23J µg/L (below MCLs) at 77 feet bgs.
Dibromochloromethane	67 and 77 feet	8.6 μg/L at 67 feet, decreased with depth to 1.5 μg/L at 77 feet bgs.
Dibromomethane	77 feet	0.51 µg/L at 77 feet.
Freon 113	57 feet	0.43J µg/L at 57 feet, decreased with depth to not detected at 67 feet bgs.
Ethylbenzene	67 and 77 feet	3.3 µg/L at 67 feet bgs, decreased with depth to 0.89 µg/L (below MCLs) at 77 feet bgs.
Isopropylbenzene	67 feet	0.21J µg/L at 67 feet bgs, decreased with depth to not detected at 77 feet bgs.
Total Xylenes	67 and 77 feet	18.4 µg/L at 67 feet bgs, decreased with depth to 3.5 µg/L (below MCLs) at 77 feet bgs.
n-propylbenzene	67 and 77 feet	0.81 μg/L at 67 feet bgs, decreased with depth to 0.23J μg/L (below MCLs) at 77 feet bgs.
Naphthalene	67 and 77 feet	0.16J to 0.12J µg/L (below MCLs) at 67 and 77 feet bgs, respectively.
PCE	57, 67 and 77 feet	200 μg/L at 57 feet bgs, decreased with depth to 1.2 μg/L at 67 feet , and increases to 48 μg/L at 77 feet bgs.
Toluene	67 and 77 feet	4.2 μg/L at 67 feet, decreased with depth to 1.3 μg/L (below MCLs) at 77 feet
TCE	57, 67 and 77 feet	51 μg/L at 57 feet, decreased with depth to 0.37J μg/L at 67 feet, and increasing to 21 μg/L at 77 feet bgs.
Freon 11	57, 67 and 77 feet	110 µg/L at 57 feet, decreased with depth to 0.55 µg/L at 67 feet and increasing to 43 µg/L (below MCLs) at 77 feet

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MW-15: Four primary water samples were collected at depths of approximately 45, 50, 60, and 72 feet bgs. VOCs were detected as follows.

VOC Analyte	Depths Detected	Results/Comment
1,1-DCA	50, 60 and 72 feet	0.85 to 3 µg/L (below MCLs). Maximum concentration at 50 feet bgs, decreased with depth to 0.85 µg/L at 60 feet, increasing to 2 µg/L at 72 feet bgs.
1,1-DCE	45, 50, 60 and 72 feet	9.4 to 990 μg/L. Maximum concentration at 50 feet bgs, decreased with depth to 170 μg/L at 60 feet, increasing to 660 μg/L at 72 feet bgs.
1,2-DCA	50, 60 and 72 feet	3.8 to 12 μg/L. Maximum concentration at 50 feet, decreasing to 3.8 μg/L at 60 feet, increasing to 7.7 μg/L at 72 feet bgs.
Chloroform	45, 50, 60 and 72 feet	1.8 to 180 μg/L. Maximum concentration at 50 feet, decreasing to 39 μg/L at 60 feet, increasing to 110 μg/L at 72 feet bgs.
cis-1,2-DCE	50, 60 and 72 feet	1.9 to 6.6 µg/L (below MCLs). Maximum at 50 feet, decreasing to 1.9 µg/L at 60 feet, increasing to 3.2 µg/L at 72 feet.
trans-1,2-DCE	50 and 72 feet	1.3 and 0.85 μg/L
Freon 113	50 and 72 feet	2.1 to 3.4 µg/L (below MCLs).
PCE	45, 50, 60 and 72 feet	57 to 1,300 μg/L. Maximum of 1,300 μg/L at 50 feet, decreases to 220 μg/L at 60 feet, and increases to 810 μg/L at 72 feet.
Toluene	60 feet	1.4 μg/L
TCE	45, 50, 60 and 72 feet	8.3 to 410 µg/L. Maximum at 50 feet, decreases to 120 µg/L at 60 feet, and increases to 180 at 72 feet.
Freon 11	45, 50, 60 and 72 feet	3.8 to 470 µg/L, Maximum at 50 feet, decreases to 71 µg/L at 60 feet, and increases to 430 at 72 feet.

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• <u>MW-16:</u> Ten primary samples and one duplicate sample were collected at depths ranging from 57 to 172 feet bgs. VOCs were detected as follows.

VOC Analyte	Depths Detected	Results/Comment
1,1-DCA	57, 62,	2.2-27 µg/L. 8.2 µg/L at 57 feet, increasing to
	72 and	27 μg/L at 62 feet, decreased with depth to
	82 feet	below MCLs at 72 feet bgs.
1,1-DCE	57, 62,	2.5 to 30 µg/L. Maximum concentration at 57
	72 and	feet bgs, decreased with depth to below MCLs
	82 feet	at 82 feet bgs.
Chloroform	72 feet	1.2 µg/L.
cis-1,2-DCE	57, 62,	2.2-46 µg/L (below MCLs). Maximum at 62
	72 and	feet bgs, decreased with depth to not detected
	82 feet	at 92 feet bgs.
PCE	57, 62,	14 to 46 µg/L. Maximum at 762 feet bgs,
	72 and	decreased with depth to not detected at 92
	82 feet	feet bgs
TCE	57, 62,	0.54 to 38 µg/L. Maximum at 72 feet bgs,
•	72, 82,	decreased with depth to 0.54 µg/L at 92 feet,
	133, 142	increases to 21 µg/L at 133 feet, and
	and 162	decreases to not detected at 172 feet bgs
	feet	
Freon 11	57, 62,	110 µg/L at 57 feet, decreased with depth to
	72 and	0.55 μg/L at 67 feet and increasing to 43 μg/L
	82 feet	at 77 feet

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• <u>MW-17:</u> Seven primary samples and one duplicate sample were collected at depths ranging from 51.5 to 192 feet bgs. VOCs were detected as follows.

VOC Analyte	Depths Detected	Results/Comment
1,1,1-trichloroethane	97 feet	9 μg/L. Decreased with depth to not detected
(TCA)		at 117 feet.
1,1-DCA	97 feet	11 µg/L. Decreased with depth to not detected at 117 feet bgs.
1,1-DCE	97 and 117 feet	1 to 75 µg/L. Maximum concentration at 97 feet bgs, decreased with depth to below MCLs at 117 feet bgs.
Chloroform Chloroform	97 feet	1.6. µg/L.
cis-1,2-DCE	97 and	0.55 to 30 μg/L (below MCLs). Maximum at 97
	117 feet	feet bgs, decreased with depth to less than
		MCLs at 117 feet bgs.
PCE	97, 117,	0.83 to 240 µg/L. Maximum at 97 feet bgs,
	147, 172	decreased with depth to below MCLs at 147
	and 182	feet bgs
	feet	
TCE	97, 117,	1.2 to 130 µg/L. Maximum at 97 feet bgs,
	172, 182	decreased with depth to not detected at 147
	and 192	feet bgs, increasing to 15 µg/L at 172 feet, and
	feet	decreasing to 1.2 µg/L at 192 feet bgs.
Freon 11	97	0.56 to 23 µg/L. Maximum at 97 feet bgs,
	and117	decreased with depth to not detected at 147
	feet	feet bgs.

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• <u>MW-18</u>: Eleven primary and one duplicate samples were colleted at approximate 10-foot intervals from 52 to 187 feet bgs. VOCs were detected as follows.

VOC Analyte	Depths Detected	Results/Comment
Chloroform	187 feet	1.5 µg/L.
Naphthalene	128 feet	1.2 µg/L. Decreased with depth to not detected at 148 feet bgs.
PCE	67, 77, 87, 97 and 115 feet	0.54 to 1.2 µg/L (below MCLs). Decreased with depth to not detected at 148 feet.
TCE	67 feet	1.5 µg/L. Decreased with depth to not detected at 77 feet bgs.

 MW-19: One primary sample was colleted at approximately 68 feet bgs. VOCs were detected as follows.

VOC Analyte	Depths Detected	Results/Comment
1,2,4-TMB	68 feet	0.73 μg/L
Ethylbenzene	68 feet	1.1 μg/L
Total Xylenes	68 feet	5.7 μg/L
Toluene	68 feet	1.5 μg/L
Bromodichloromethane	68 feet	1.6 μg/L
Bromoform	68 feet	5.3 μg/L
Dibromochloromethane	68 feet	4.6 μg/L

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 <u>MW-20:</u> Ten primary and two duplicate samples were collected at this location. Water samples were collected at 10-foot intervals from 73 feet to 183 feet, with exception of at 163 and 173 (no recovery) feet bgs. VOCs were detected as follows.

VOC Analyte	Depths Detected	Results/Comment
1,1-DCA	73, 83, 93, 103, 113, 123, 133 and 143 feet	1.8 to 7.8 µg/L, Maximum at 73 and 93 feet bgs decreased with depth to not detected at 153 feet bgs.
1,1-DCE	73, 83, 93, 103, 113, 123, 133, 143 and 153 feet	1.0 to 68 µg/L. Maximum concentration at 103 feet bgs, decreased with depth to not detected at 183 feet bgs.
1,2-DCA	73, 83, 93, 103, 113, 123, 133 and 143 feet	0.88 to 2.2 µg/L, decreased with depth to not detected at 153 feet bgs.
1,2-dichloroepropane	73, 83, 93, 103, 113, 123, 133 and 143 feet	0.62 to 5.4 µg/L. Maximum concentration at 103 feet bgs, decreased with depth to not detected at 153 feet bgs.
Bromoform	83 feet	0.93 μg/L
Chloroform	73, 83, 93, 103, 113, 123, 133 and 143 feet	0.62 to 1.4 µg/L. Maximum at 103 feet bgs. Decreased with depth to not detected at 153 feet bgs.
cis-1,2-DCE	73, 83, 93, 103, 113, 123, 133, 143, 153, 163, 173 and 183 feet	0.59 to 11 μg/L (below MCLs). Maximum at 73 and 83 feet bgs, decreased with depth to 0.59 μg/L at 113 feet bgs, increasing to 1.5 μg/L at 153 feet, and staying relatively consistent to 183 feet bgs.
Dibromochloromethane	83 feet	0.52 μg/L
PCE	73, 83, 93, 103, 113, 123, 133 and 143 feet	15 to 40 µg/L. Maximum at 73 and 93 feet bgs, decreased with depth to not detected at 153 feet bgs,
TCE	73, 83, 93, 103, 113, 123, 133, 143 and 153 feet	8.3 to 50 µg/L. Maximums at 93 feet bgs., decreased with depth to not detected at 183 feet bgs.
Freon 11	73, 83, 93, 103, 113, 123, 133 and 143 feet	1.1 to 5.0 μg/L. Maximum at 93 feet bgs. Decreased with depth to not detected at 153 feet bgs.

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• <u>MW-21:</u> Two primary samples were colleted at this well location: at 69 and 79 feet bgs. VOCs were detected as follows.

VOC Analyte	Depths Detected	Results/Comment
1,2,4-TMB	69 and 79 feet	1.1 µg/L
Ethylbenzene	69 and 79 feet	1.6 μg/L
Total Xylenes	69 and 79 feet	8.8 µg/L
Toluene	79 feet	2.1 µg/L
Bromodichloromethane	79 feet	0.83 µg/L
Bromoform	79 feet	2.0 μg/L
Chloroform	79 feet	0.57 µg/L
Dibromochloromethane	79 feet	2.3 μg/L
PCE	69 and 79 feet	1.7 μg/L to 1.8 μg/L

MW-22: Three primary samples and one duplicate sample were collected at this
well location: at 68, 78 and 88 feet bgs. VOCs were detected as follows.

VOC Analyte	Depths Detected	Results/Comment
1,2,4-TMB	68 feet	0.24J μg/L
Ethylbenzene	88 feet	0.3 µg/L
Total Xylenes	88 feet	C 1.48J µg/L
Toluene	88 feet	0.49J μg/L
Bromodichloromethane	88 feet	1.3 µg/L
Bromoform	88 feet	2.5 μg/L
Dibromochloromethane	88 feet	3.1 µg/L
Chloroform	68, 78 and 88 feet	0.39 to 1.4 μg/L
PCE	68, 78 and 88 feet	0.37 to 1.4 μg/L
TCE	78 feet	0.28 μg/L

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 MW-23: Twelve primary water samples and two duplicates were collected at this location, at approximate 10-foot intervals from 42 to 62, from 82 to 92, and from 132 to 192 feet bgs. VOCs were detected as follows.

VOC Analyte	Depths Detected	Results/Comment
1,1,2-TCA	42 and 62 feet	0.58 to 0.64 μg/L, decreased with depth to not detected at 82 feet bgs.
1,1-DCA	42 and 62 feet	2.6 to 2.9 µg/L, decreased with depth to not detected at 82 feet bgs.
1,1-DCE	42, 52, 62, 82, 92, 132, 162 and 182 feet	0.53 to 430 μg/L. Maximum concentration at 62 feet bgs, decreased with depth to 0.53 μg/L at 132 feet bgs. Remains below MCLs from 162 to 182 feet bgs
1,2-DCA	42, 52 and 62 feet	4.3 to 15 μg/L, decreased with depth to not detected at 82 feet bgs.
Benzene	82 feet	1.0 µg/L (MCL)
Bromoform	152 and 172 feet	1.3 and 2.3 µg/L, respectively. Decreased with depth to not detected at 182 feet bgs.
Carbon tetrachloride	162 feet	1.0 μg/L.
Chloroform	42, 52, 62, 82, 92, 132 and 162 feet	0.76 to 140 µg/L. Maximum at 42 and 62 feet bgs. Decreased with depth to not detected at 172 feet bgs.
cis-1,2-DCE	42, 52, 62, 82, 92 and 182 feet	1.6 to 30 µg/L (below MCLs). Maximum at 42 feet bgs, decreased with depth to not detected at 142 feet bgs, and increases to 1.6 µg/L at 182 feet bgs.
trans-1,2-DCE	42 and 62 feet	1.8 and 1.2 µg/L, respectively.
Dibromochloromethane	172 feet	0.69 µg/L.
PCE	42, 52, 62, 82, 92, 132, 162, 182 and 192 feet	1.8 to 660 µg/L. Maximum at 62 feet bgs, decreased with depth to not detected at 142 feet bgs, then increasing to 5.8 µg/L at 162 feet bgs, and 27 µg/L at 182 feet bgs, decreasing to 0.52 µg/L (below MCLs) at 192 feet bgs
Toluene	42 and 142 feet	1.5 and 0.61 µg/L, respectively.
TCE	42, 52, 62, 82, 92, 132, 162 and 182 feet	1.6 to 580 µg/L. Maximums at 62 feet bgs., decreased with depth to not detected at 152 feet bgs, then increases to 120 µg/L at 162 feet bgs, then decreases again to 1 µg/L at 192 feet bgs.
Freon 11	42, 52, 62, 82, 162 and 182 feet	1.4 to 110 µg/L (below MCLs). Maximum at 62 feet, decreased with depth to not detected at 92 feet, detected at 1.4 µg/L at 162 feet, increasing to 11 µg/L at 182 feet, decreasing to not detected at 192 feet bgs.

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4.3 Chemical Findings – Baseline Groundwater Sampling

A summary of the chemical findings for groundwater monitoring samples collected in July 2006 is presented below. A list of sample identifications is presented in Table 5. Chemical data are summarized in Tables 6 to 10 and discussed in the following sections. Laboratory reports are included in Appendix K. Trends in the lateral and vertical extent of chemicals are discussed in Section 6.

4.3.1 VOCs

A total of 19 VOCs were detected in one or more of the monitoring wells. Concentrations of VOCs detected during the groundwater monitoring event of July 2006 are summarized in Table 6.

4.3.2 SVOCs

Bis(2-Ethylhexyl)phthalate was the only SVOC detected during the groundwater sampling. This compound is a common contaminant associated with latex gloves. Table 7 summarizes the results for SVOCs.

4.3.3 Other Compounds

Other compounds (1,2,3-TCP, NDMA, hexavalent chromium, perchlorate and 1,4-dioxane), NDMA, hexavalent chromium, perchlorate and 1,4-dioxane were detected. Concentrations of other compounds detected during the groundwater monitoring event of July 2006 are summarized in Table 8.

4.3.4 Total Dissolved Metals

Eighteen dissolved metals were detected in one or more of the groundwater monitoring wells during the July 2006 monitoring event. Results are summarized in Table 9.

4.3.5 Anions

Anion constituent tested for, included TDS, bromide, chloride, fluoride, nitrogen as nitrate, nitrogen as nitrite, organophosphate P, and sulfate.

Concentrations of anions detected during the groundwater monitoring event of July 2006 are summarized in Table 10.

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4.3.6 TKN

TKN concentrations ranged from 0.0906J to 0.639J mg/L. The highest concentration was detected in well MW-12. Concentrations of TKN detected during the groundwater monitoring event of July 2006 are summarized in Table 10.

4.3.7 Total Cyanide

Total cyanide concentrations were detected in only wells MW12 and MW13. Concentrations ranged from 0.0052 in MW-13 to 0.0069 mg/L in MW-12 to 0.0069 mg/L. Concentrations of total cyanide detected during the groundwater monitoring event of July 2006 are summarized in Table 10.

4.3.8 Total Organic Carbon (TOC)

TOC was detected in water samples from all wells except MW-18C. Concentrations of TOC ranged from 0.526J to 32 mg/L. Concentrations of TOC detected during the groundwater monitoring event of July 2006 are summarized in Table 7.

4.3.9 Total Dissolved Solids (TDS)

TDS were detected in water samples from all wells. Concentrations of TDS ranged from 430 to 2,970 mg/L per liter. Concentrations of TDS detected during the groundwater monitoring event of July 2006 are summarized in Table 10.

5. Data Usability and Data Quality Evaluation

An integral part of the FSP was the QA/QC Program. The QA/QC Program was established to ensure the reliability and compatibility of data generated during the implementation of the FSP. The QAPP provided specific descriptions of the field and laboratory procedures which were employed for verifying and maintaining performance quality for collection of environmental samples and subsequent chemical analysis. The QAPP set forth the policies, procedures and activities for the identification and documentation of the precision, accuracy, and completeness of the data. The QAPP also provides criteria to evaluate how representative the data are of the conditions at the site during the implementation of the FSP.

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During the well installation and sampling program, a variety of data were collected. Samples collected were analyzed for a number of different chemicals, depending on the rationale for sample collection. Data collected were evaluated to determine which of the chemicals identified are likely to be site-related and to assess whether the reported concentrations for these chemicals are of acceptable quality. The following sections discuss the appropriateness for use of the methodologies and the evaluation of the data obtained.

Many factors must be evaluated to determine whether or not the DQOs outlined in the RIWP were met during implementation of the FSP. These factors include using the sampling equipment proposed in the FSP; determining if the appropriate laboratory analytical methods were used (compared with those proposed in the FSP and QAPP), verifying that appropriate MDLs were met; evaluating how closely the chemical results reflect actual concentrations in the sampled media (representativeness); evaluating how close the measured value is to the true value (accuracy); evaluating the reproducibility of repetitive measurements (precision); and evaluating the completeness of the data set by comparing the amount of valid data compared to expected data under ideal conditions. In accordance with the QAPP, an independent third party, Laboratory Data Consultants of Carlsbad, California (LDC), performed an EPA-Level III review of 10 percent of the laboratory analytical and QC data generated as part of the baseline groundwater sampling. Copies of LDC's review of analytical and QC data is attached as Appendix L. This section of the report presents these evaluations of the data sets collected for this project.

5.1 Field Sampling

5.1.1 Depth-Discrete Water Sampling

Depth-discrete water samples were collected during drilling activities using a Simulprobe® sampling system. The system is described in Section 3.5.4. Sampling problems and field conditions that may have affected data usability include:

- Incompatibility with formation materials. In tight clay conditions, little to no water entered the sampling system.
- Entrance of drilling mud into the sampler instead of formation water. This condition
 occurred at MW-16 and MW-23. It is possible the drilling mud penetrated ahead of
 the core-bit in coarse materials. Chemical data from the drilling mud was
 determined to be not valid, and is not used to make conclusions regarding the
 vertical extent of chlorinated VOC impact.

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 Pinching of the sampling tubes as a result of expansion and contraction of the splitspoon covers during advancement of the system. This condition resulted in no sample collection, and occurred at MW-16, MW-18 and MW-20. As no samples could be collected, the only impact this condition resulted in was a lower percent completeness.

5.1.2 Groundwater Monitoring

Groundwater monitoring samples were collected using dedicated bladder pumps and low-flow sampling methodologies. The use of the dedicated bladder pumps was directed by EPA. The pumps were certified clean by the pump manufacturer, QED, as evidenced by QC samples certificates accompanying the pumps. Pumps were not installed in wells MW-13A, MW-17A and MW-19, upon agreement with EPA and EPA's oversight contractor, CH2M Hill. Well MW-13A is a dry well; MW-17A and MW-19 both had limited water at the time of ordering the pumps, and had poor recovery.

Full sample sets were recovered from the wells with the exception of MW-19. At this location, sufficient sample containers were filled to run a complete suite of analyses per the FSP; however, only one 1-liter amber bottle was collected for SVOCs instead of the requested two. This, however, did not affect the laboratory's ability to analyze this sample.

5.2 Analytical Methods

The analytical methodology used for data collection was assessed for appropriateness during development and review of the FSP. With the following exception, the analytical program outlined in the FSP was followed.

 NDMA was analyzed using EPA Method 8270SIM whereas the FSP analytical program directed that NDMA be analyzed by EPA Method 1625.

Analytes detected at concentrations below the reportable limit, but above the MDL were issued a "J" flag qualifier, as shown in Table 4 and Tables 6 through 10.

Analytes detected at concentrations above the calibration curve were issued an "E" flag qualifier. These samples were then diluted and reanalyzed at the lower dilution. Samples diluted by the laboratory were issued a "DIL" suffix to their sample ID. Concentrations of chemicals detected, that may have been affected by issues associated with laboratory QC (calibration, detections in QC samples, etc) were issued "J" flags. Similarly, non-detect results for specific analytes that may have been affected by issues associated with laboratory QC were issued "UJ" flags.

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5.2.1 Cooler Temperature Upon Arrival

According to laboratory receipt logs, sample temperatures upon arrival ranged between 3 and 4 degrees Celsius.

5.2.2 Holding Time

A review of date sampled, date received, and date of extraction indicate that no holding times were exceeded.

5.2.3 Surrogate Recovery

Surrogate recoveries were within acceptable ranges.

5.2.4 MS/MSD Evaluation

MS/MSDs run by the laboratory were within acceptable range.

5.3 Representativeness

Representativeness is a measure of how closely the chemical results to be evaluated reflect the actual concentrations or distribution of the COCs in the matrix samples. Alternatively, representativeness represents an evaluation of whether chemicals detected in the samples are site-related or the result of cross-contamination or other environmental conditions. It is a combination of accuracy and precision. Several field QC samples were collected during the course of this investigation to assist in this evaluation: trip blanks, field blanks, and equipment blanks. Trip blanks assist in evaluating if cross contamination occurs in transit of the samples. Field blanks are used to evaluate the potential for contamination of sampled water during transfer from the sampling device into the sampling containers (i.e as a result of VOCs in ambient air in the sample-collection area). Equipment blanks assist in evaluating the potential of cross contamination due to improper decontamination procedures

5.3.1 Depth-Discrete Water Sampling

ARCADIS collected field blanks and equipment blanks during the depth discrete water sampling. Field blanks were collected each day depth-discrete water sampling was performed. Equipment blanks were collected once per location. Trip blanks were collected and sent with every shipment of samples. Field QC samples were analyzed for VOCs using EPA Method 8260B.

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Trip Blanks – Thirty-five trip blanks were analyzed during well drilling activities. Chemical results of trip blanks indicated that VOCs were not detected in all but three samples. Methylene chloride was detected in three of the samples (OC2-PMW14-W-4-01, OC2-PMW22-W-4-02, and OC2-PMW22-W-4-08) at concentrations ranging from 0.24J to 0.28J µg/L. Methylene chloride is a common laboratory contaminant.

Field Blanks – Seventeen field blanks were analyzed during drilling activities. Chemical results of field blanks indicated only two detects (sample IDs OC2-PMW13-W-2-03 and OC2-PMW18-W-2-02), both of chloroform, at concentrations of 0.85 to 0.87 μ g/L. While chloroform is a contaminant of concern, it is also a common trihalomethane.

Equipment Blanks – Fifteen equipment blanks were collected and analyzed during drilling activities. Chemical results of equipment blanks indicated three detects: two of chloroform (sample IDs OC2-PMW13-W-3-06 and OC2-PMW18-W-3-08) at concentrations of 0.74 and 0.78 μ g/L, and one for Naphthalene (sample OC2-PMW22-W-3-01) at 0.23J μ g/L. The same water source was used for the equipment blanks as those for the field blanks at each of the locations

Chemical results of duplicate samples, when compared with the associated primary samples, indicate Relative Percent Differences (RPDs) ranging from 0 to 48 percent. The acceptable RPD for duplicate samples is 20 percent. The acceptable RPD was exceeded in the following samples for the following chemicals:

OC2-PMW12-W-0-03 for 1,1-DCE (45 percent); and, PCE (48 percent).
 Concentrations of 1,1-DCE in the primary and duplicate samples were 19 and 12 μg/L, respectively. Concentrations of PCE were 3.1 and 1.9 μg/L, respectively.

Based on the above, it is believed that those chemicals detected in primary samples are representative of those found in the groundwater sampled. The methylene chloride detected in the three trip blanks is a typical laboratory contaminant. Methylene chloride was detected in only the three trip blanks, and not in the primary samples. Although chloroform was detected in two field blanks and in two equipment blanks, it is already a chemical of concern. Chloroform appears (typically at higher concentrations) in primary samples in which other VOCs are also present, but does not appear in those primary samples collected at the locations where chloroform was present in the field QC samples.

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Based on the above evaluation, chemical results for depth-discrete water samples collected during the drilling program are representative of actual groundwater conditions.

5.3.2 Groundwater Monitoring

Field QC samples were collected in accordance with procedures and frequencies outlined in the EPA-approved FSP and QAPP. Trip blanks, prepared by and supplied by EMAX Laboratories, were placed in those coolers containing water samples designated for VOC analysis (EPA Method 8260B). Field blanks were prepared on each day of sampling activities with the exception of July 13, 2006. Equipment blanks were not collected as purging and sampling was performed using new dedicated bladder pumps. For wells MW-17A and PMW19, the wells were purged and sampled using new, disposable, polyethylene bailers.

Chemical results of trip blanks indicated that, with the exception of a trace concentration of 0.26J µg/L Freon 11 (trichlorofluoromethane, sample ID OC2-00-W-4-29) on July 11, 2006, VOCs were not detected in any of the trip blanks.

Chemical results of field blanks indicated that, chloroform was detected in each of the field blanks at concentrations of 0.31 to 0.34 μ g/L. Water used for field blanks was deionized water prepared by and supplied by the laboratory. Primary sample results collected on the same day will be issued a J flag.

Based on the above, chemical results are deemed to be representative of actual concentrations in the groundwater.

5.4 Completeness

Completeness is a measure of the amount of valid data compared to the amount of valid data expected under ideal conditions. A discussion of completeness of the data sets for the depth-discrete water samples and the groundwater monitoring samples follows.

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5.4.1 Depth-Discrete Water Sampling

Approximately 85 attempts were made to collect depth discrete water samples during drilling activities. Sixty-five primary water samples were collected: 5 attempts failed due to tight formation material; 7 attempts failed due to mud intrusion; and, 8 attempts failed due to mechanical issues (pinched Simulprobe tubes). The percentage of successful samples collected compared to total attempts, not including attempts failed due to formation conditions, is 81 percent.

5.4.2 Groundwater Monitoring

Water samples were collect from all the groundwater monitoring wells except MW-13A. A water sample was not collected from MW-13A as the well was dry. The percentage of successful sample collection is 100 percent.

5.5 EPA Level III Laboratory Data Review

As previously indicated, LDC performed an EPA-Level III data quality review of laboratory results for 10 percent of the groundwater monitoring samples collected. Laboratory results for the full suite of analyses for samples OC2-PMW15-)-17, OC2-PMW18A-0-22, and OC2-PMW18B-0-23 were submitted for LDC's review. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999:
- USEPA, Contract Laboratory Program national Functional Guidelines for Inorganic Data Review, October 2004; and
- EPA SW 846, Third Edition, Test methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998.

A review of LDCs findings follow. Copies of LDCs review are included as Appendix L. Only QC issues identified will be discussed below.

 Volatile Organics: QC issues identified by LDC include exceedances in Initial Calibration Relative Response Factors (RRFs), Continuing Calibration exceedances in Percent Differences, Continuing Calibration exceedances in RRFs; and Contract Required Quantitation Limits (CRQLs). These are summarized below.

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Lab ID	Sample ID	Compound	Flag	Reason
06G039	OC2-PMW15-0-17	Acetone	J (all detects)	Initial Calibration
	OC2-OMW15-0-17DL		UJ (all non	RRF
	OC2-PMW18A-0-22	2-Butanone	detects [NDs])	
	OC2-PMW18B-0-23		J (all detects)	
			UJ (all NDs)	
06G039	OC2-PMW15-0-17	Bromomethane	J (all detects)	Continuing
	OC2-PMW18A-0-22		UJ (all NDs)	Calibration (%
	OC2-PMW18B-0-23	Cyclohexane	J (all detects)	Difference)
			UJ (all NDs)	
06G039	OC2-PMW15-0-17	Acetone	J (all detects)	Continuing
	OC2-OMW15-0-17DL		UJ (all NDs)	Calibration (RRF)
	OC2-PMW18A-0-22	2-Butanone	J (all detects)	
	OC2-PMW18B-0-23		UJ (all NDs)	
06G039	OC2-PMW15-0-17	1,1 DCE	J (all detects)	Compound
		Chloroform	J (all detects)	Quantitation and
		PCE	J (all detects)	CRQLs
		TCE	J (all detects)	
		Freon 11	J (all detects)	
		Freon 113	J (all detects)	

• <u>Semi-Volatile Organics:</u> QC issues identified by LDC include exceedances in the Continuing Calibration percent differences. These are summarized below.

Lab ID	Sample ID	Compound	Flag	Reason
06G039	OC2-PMW15-0-17	Hexachlorocyclopentadiene	J (all detects)	Continuing
	OC2-PMW18A-0-22		UJ (all NDs)	Calibration
	OC2-PMW18B-0-23			(% Difference)

It should be noted that hexachlorocyclopentadiene was not detected in any of the samples collected.

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<u>Semi-Volatile Organics</u>: QC issues identified by LDC include the presence of Bis(2 ethylhexyl)phthalate in the method blank, and exceedances in the RPDs of laboratory control samples (LCS). These are summarized below.

Lab ID	Sample ID	Compound	Flag	Reason
06G039	OC2-PMW15-0-17 OC2-PMW18A-0-22 OC2-PMW18B-0-23	Bis(2 ethyl hexyl) phthalate Pentachlorophenol	J (all detects) UJ (all NDs) J (all detects) UJ (all NDs)	LCS-RPDs

As a result of the presence of Bis(2 ethyl hexyl) phthalate in the method blank, LDC modified the reported concentrations by adding a "U" flag in samples OC2-PMW18A-0-22 and OC2-PMW18B-0-23. The reported concentrations of this analyte in these samples should now read 2U μ g/L and 2.1U μ g/L, respectively. The modification with the "U" flag indicates that, although the laboratory reported a detectable concentration, QC data indicates this analyte was not present in the sample.

- 1,2,3-TCP: all data was found to be acceptable.
- 1,4-dioxane: all data was found to be acceptable.
- NDMA; all data was found to be acceptable.
- <u>Dissolved Metals:</u> antimony was detected in the initial calibration blank at a concentration of 0.353 μg/L. Subsequently, the antimony concentration in sample OC2-PMW18A-0-22 was modified to read 0.406U μg/L.
- Wet Chemistry (pH, TDS, anions, cations, total cyanide, TOC, TKN, hexavalent chromium and perchlorate): calibration verification frequency and analysis criteria were met for all analytes with the exception of TKN. The percent recovery limits were exceeded for the ICV laboratory QC sample. Subsequently, TKN results for samples OC2-PMW15-0-17, OC2-PMW18A-0-22, and OC2-PMW18B-0-23 were issued "J" flags for all detects.

Based on LDC's review of laboratory analyses and QC data, all data were deemed acceptable, with few exceptions. These exceptions required the issuance of "J", "U", or "UJ" flags to some analytes.

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6. Discussion of Results

A discussion of physical and chemical results follows.

6.1 Physical Results

Based on the analysis described in Section 4.1, the following observations were made:

- Wells MW-12, MW-13B, MW-14 and MW-15 appear to be completed in the
 Gaspur aquifer. Groundwater in these wells occur at elevations ranging from
 123.71 (MW-15) to 135.43 feet above msl (MW-12). Groundwater elevation data
 indicates flow in a southeasterly direction (e.g., from MW-12 towards MW-13).
 This differs from previous flow patterns shown (Weston, 2003). In the past,
 groundwater has been depicted as flowing in a more southwesterly direction.
- Wells MW-16A, MW-19, MW-20A and MW-21 appear to be screened in the Gage aquifer. Groundwater elevations range from 73.96 feet above msl (MW-20A) to 107.12 feet above msl (MW-16A) and appear to flow to the southwest. This is generally consistent with previously shown flow directions (Weston, 2003).
- Wells MW-16B, MW-17A, MW-18A, MW-20B, MW-22, MW-23B appear to be screened in the upper sand member of the Hollydale. Wells MW-17B, MW-18B appear to be screened in the lower sand member of the Hollydale. Piezometric elevations of groundwater in the upper sand member of the Hollydale ranges from 73.63 (MW-20B) to 120.73 (MW-23B) feet above msl, and flows to the southwest.
- Wells MW-16C, MW-20C and MW-23C are believed to be completed in the Jefferson aquifer. Piezometric groundwater elevations range from 63.45 feet above msl (MW-20C) to 117.99 feet above msl (MW-23C). Groundwater is believed to flow to the south in this zone.
- MW-17C and MW-23D are believed to be completed in the Lynwood aquifer.
 Groundwater is believed to flow to the south-southwest.

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6.2 Chemical Results

Trends in the lateral and vertical extent of COCs are discussed in the following section.

6.2.1 COCs

The following constituents were detected at concentrations exceeding published or proposed regulatory levels:

- VOCs: 1,1-DCA, 1,1-DCE, 1,2-DCA, cis-1,2 DCE, trans-1,2 DCE, chloroform, PCE, TCE, Freon 11
- Perchlorate and 1,4-dioxane
- Dissolved Metals: Manganese
- Inorganics: TDS and sulfate

A brief discussion of these chemicals and their trends as detected in the wells installed during this investigation follows.

6.2.2 VOCs

The core of the VOC plume appears to extend southwest through wells MW-14, MW-15, MW-23 and MW-17, decreasing toward MW-20. VOC concentration trends discussed by hydraulic units follow.

- In the wells presumed to be completed in the Gaspur aquifer (MW-12 through MW-15), concentrations of PCE, TCE, cis-1,2 DCE, Freon 11, Freon 113, and chloroform increase, in general, from northeast to southwest (cross-gradient to groundwater flow). Well MW-13B. exhibited the lowest VOC concentrations while well MW-15 exhibited the highest. The presence of elevated VOC concentrations in well MW-12 (upgradient of well MW-13, and of the former Omega Chemical facility) suggests an source near or upgradient to well MW-12.
- In the wells presumed to be completed in the Hollydale aquifer, concentrations increase to the southwest (with groundwater flow) from MW-17, then decrease towards well MW-20. The lateral extent of the plume in this aquifer is defined to the west and east by wells MW-16, MW-22, and MW-18.

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- VOCs in wells presumed to have been completed in the Jefferson and Lynwood aguifers follow a similar trend as those in the Hollydale.
- The vertical distribution of VOCs in the triple-nested wells (MW-16, MW-17, MW-18, MW-20, and MW-23) suggests the Hollydale aquifer is the more significantly impacted. VOC concentrations decrease with depth. With the exception of well MW-17, concentrations decrease to below MCLs in the Jefferson and Lynwood aquifers. In well MW-17, TCE exceeds MCLs in the Lynwood aquifer.

6.2.3 Perchlorate and 1,4-Dioxane

As previously mentioned, concentrations of perchlorate were identified in excess of the California DHS proposed MCL (6 μ g/L) in a number of samples. In addition, samples with concentrations of 1,4-dioxane in excess of the California DHS Advisory Action Level (3 μ g/L) were also identified.

Perchlorate, in excess of the proposed MCL, was identified in the following wells and in the following presumed hydraulic units:

Gage: (MW-16A). Perchlorate concentrations increased to the southwest (with groundwater flow) from 4.19J μ g/L (below MCLs) in MW-15 to 6.62 μ g/L (above MCLs) in MW-16A. Well MW-15 is presumed to be completed in the Gaspur aquifer while MW-16A in the Gage.

Hollydale: Perchlorate concentrations exceeded the proposed MCL in wells MW-17A, MW-18A, and MW-18B. Wells MW-18A and MW-18B are not directly upgradient of well MW-17A. Separate sources for perchlorate are therefore likely to exist somewhere between MW-23 and MW-17, and upgradient of well MW-18. At each location (MW-17 and MW-18) perchlorate concentrations decrease with depth, attenuating to concentrations below the proposed MCLs in wells MW-17B and MW-18C. Perchlorate concentrations further decrease in well MW-17C.

The compound 1,4-dioxane was identified in the following wells and in the following presumed hydraulic units:

Gaspur and Gage: Concentrations of 1,4-dioxane exceed advisory action levels in wells MW14, MW-15, and MW-20A. Increases in concentrations of 1,4 Dioxane between wells MW-14 and MW-15 (from 6.6 µg/L to 58 µg/L, respectively) suggests a point source somewhere between these wells. A separate point source is likely to be found just upgradient of well MW-20A, as evidenced by an increase in 1,4 Dioxane concentrations between MW-17A and MW-20A.

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Hollydale: Concentrations of 1,4-dioxane exceed advisory action levels in wells MW-17A and MW-20B. Concentrations of 1,4-dioxane increase to the southwest (with groundwater flow) from not detected in well MW-23B to 64 μ g/L in well MW-17A, decreasing to 4.1 μ g/L in well MW-20B. This suggests a point source somewhere between wells MW-23 and MW-17. This point source is likely different from that discussed below.

Jefferson: Concentrations of 1,4-dioxane exceed the advisory action level only in well MW-23C (36 μ g/L). Concentrations of 1,4-dioxane in the shallower well MW-23B, presumed to be completed in the Hollydale aquifer) and in the deeper well, MW-23D, presumed to be completed in the Lynwood aquifer, were not detected. This suggests a point source upgradient of well MW-23, that has impacted the Gage, Hollydale, and Jefferson aquifers.

The vertical distribution of 1,4-dioxane, as observed in the triple-nested wells, indicate the Hollydale and Jefferson aquifers may be more significantly impacted. Concentrations decrease to below MCLs in the deeper Lynwood aquifer.

6.2.4 Inorganics

Concentrations of manganese, TDS and sulfate were found to exceed their respective regulatory limits.

- Manganese concentrations ranged from 0.53 to 2,190 μg/L. The secondary MCL for Manganese is 50 μg/L. A primary MCL does not exist. The California Notification Level for manganese is 500 μg/L. Manganese concentrations exceeding the secondary MCL were detected in (presumed) Gage aquifer wells MW-12, MW-14, MW-19; in (presumed) Hollydale aquifer wells MW-17A and MW-22; and in (presumed) Jefferson aquifer wells MW-16C and MW-23C.
- TDS ranged from 430 to 2,970 mg/L. The secondary MCL for TDS is 500 mg/L with an upper limit of 1,000 mg/L. A primary MCL does not exist. TDS exceeded its upper limit in nearly all the wells except MW-16C, MW-17C, MW-18C, and MW-20C.
- Sulfate concentrations ranged from 66 to 1,350 mg/L. The secondary MCL for sulfate is 250 mg/L with an upper limit of 500 mg/L. Concentrations of sulfate exceeded upper limits in wells MW-16A, MW-18A, MW-18B and MW-13B. No significant patterns or trends were observed.

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7. Conclusions

OSVOG has completed implementation of the scope of work associated with the First Amended UAO. OSVOG prepared a RIWP, HASP, FSP and QAPP. Consistent with the EPA approved FSP, 23 groundwater monitoring wells and one groundwater extraction well were installed and developed. Monitoring wells exhibiting adequate flow were equipped with dedicated sampling pumps, and groundwater sampling was conducted. Conclusions based on the findings of this document follow.

Stratigraphic units believed to have been encountered during drilling activities included the Bellflower aquiclude, the Gaspur, Gage, Artesian, Hollydale, Jefferson, and Lynwood aquifers. This information was derived from a comparison of materials encountered during drilling activities, and those published in Department of Water Resources Bulletin 104 (DWR 1961). Further details regarding materials encountered during drilling are detailed in the project well logs contained herein.

Chemical results of the July 2006 groundwater monitoring event indicate the following:

- Groundwater sampling results indicate the presence of VOCs at many locations.
 Two of the primary VOCs of concern are PCE and TCE.
 - Concentrations of PCE above the MCL were identified in MW-12, MW-14, MW-15, MW-17A, MW-17B, MW-18A, MW-20A, MW-20B, MW-23B, and MW-23C.
 - Concentrations of TCE above the MCL were identified in MW-12, MW-14, MW-15, MW-16B, MW-17A, MW-17B, MW-17C, MW-20A, MW-20B, MW-23B, and MW-23C.
 - TCE and PCE were not identified at levels above their respective MCLs in MW13B, MW-16A, MW-16C, MW-18B, MW-18C, MW-19, MW-20C, MW-21, MW-22 and MW-23D.
 - Well MW-13A did not contain adequate water for sampling. Therefore, no VOC results are available.
- Sample results from wells MW-18, MW-19, MW-21, and MW-22 further define the lateral extent of the VOC plume.
- Sample results from wells MW-13B, MW-16C, MW-18C, MW-20C, MW-21 and MW-23D have provided additional data defining the vertical extent of VOC impacts.

Draft Project Completion Report - Well Installation and Groundwater Monitoring

Omega Chemical Operable Unit 2, Whittier, CA

- The downgradient lateral extent of the VOC plume attributed to the Omega site as depicted by EPA's subcontractor (Weston, 2003) appears to be commingled with VOC impacts from other downgradient sources (CH2M Hill, 10/5/2005).
- Perchlorate was identified in most of the wells that were sampled (not found in MW-20C) at concentrations ranging from 1.11 to 8.19 µg/L. The State of California has a proposed MCL of 6 µg/L for perchlorate. The distribution of this compound indicates that there are likely sources other than the Omega facility.
- The compound 1,4-dioxane was identified in approximately half of the wells that
 were sampled at concentrations ranging from 0.96 to 65 μg/L. California DHS has
 issued an advisory action level of 3 μg/L. This concentration was exceeded in wells
 MW-14, MW-15, MW-17A, MW-20A and MW-20B. The distribution of this
 compound indicates that there are likely sources other than the Omega facility.
- The distribution of contaminants identified during this investigation is not consistent
 with a single source at the former Omega Chemical site. Overall, sample results
 indicate a commingled, regional groundwater plume originating from multiple
 sources.

8. References

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Tables

Table 1. Summary of Well Construction
Project Completion Report - Well Installation and Groundwater Monitoring
Omega Chemical Operable Unit 2, Whittier, California

						Total Casing		Casing		01.40	Screene	d Interval	Filter	Filter Pac	k Interval		Annular S	eal Interval
Well ID	Lat	Long	Fmn Water	Water (ft)	Drilling Method	Depth (ft bgs)	Diameter (inches)	Diameter (inches)	Casing Material	Slot Size (inches)	From	То	Pack Material	From	То	Annular Seal	From	То
MW12	33.9719957	-118.0462302	~87	82.9	Sonic	102	6	2	SCH80 PVC	0.01	82	97	1C	80	102	95/5 slurry	1	80
MW13A	33.9698410	-118.0453368		Dry	Mud	71	10	2	SCH80 PVC	0.02	56	66	2/16	54	69	95/5 slurry Medium Chips	1 52	52 54
													†			Medium Chips	69	71
MW13B	33.9698410	-118.0453368	~124	81.85	Mud	138	10	2	SCH80 PVC	0.02	123	133	2/16	121	139	1:1 Medium Chips	71 119	119 121
MW14	33.9675538	-118.0487301	~55	46.2	Sonic	80	6	2	SCH80 PVC	0.02	60	75	2/12	57	80	95/5 slurry Medium Chips	1 55	55 57
MW15	33.9628639	-118.0549556	~37.5	25.75	Sonic	75	6	2	SCH80 PVC	0.01	50	70	1C	48	75	95/5 slurry Medium Chips	1 46	46 48
MW16A	33.9574593	-118.0661432	~47	48.03	Mud	65	8.75	2	SCH80 PVC	0.02	45	60	2/12	43	60	95/5 slurry	1	40
 			ļ					<u> </u>					 			Medium Chips 1:1	40 65	102
MW16B	33.9574593	-118.0661432		48.9	Mud	121	8.75	2	SCH80 PVC	0.02	106	116	3	104	118	Medium Chips	102	104
MW16C	33.9574593	-118.0661432		50.78	Mud	169	8.75	2	SCH80 PVC	0.02	149	164	2/16	147	169	Medium Chips 1:1	118 121	121 145
				50.75			0.70		00.1001.10	0.02	,					Medium Chips	145	147
MW17A	33.9530399	-118.0685620		66.47*	Mud	76	8.75	2	SCH80 PVC	0.02	56	71	2/16	54	73	95/5 slurry Medium Chips	1 52	52 54
																Medium Chips	73	76
MW17B	33.9530399	-118.0685620	~95	65.95	Mud	109	8.75	2	SCH80 PVC	0.02	94	104	2/16	92	107	1:1 Medium Chips	76 90	90 92
																Medium Chips	107	109
MW17C	33.9530399	-118.0685620		73.24	Mud	187	8.75	2	SCH80 PVC	0.02	172	182	2/16	170	190	1:1 Medium Chips	109 168	168 170
		440.0540000							0.01100 51/0	2.22			0/40			95/5 slurry	1	52
MW18A	33.9546753	-118.0542282	~54	27.93	Mud	76	8.75	2	SCH80 PVC	0.02	56	71	2/16	54	76	Medium Chips	52	54
MW18B	33.9546753	-118.0542282		27.88	Mud	105	8.75	2	SCH80 PVC	0.02	90	100	2/16	88	103	1:1 Medium Chips	76 86	86 88
																Medium Chips	103	105
MW18C	33.9546753	-118.0542282		29.58	Mud	166	8.75	2	SCH80 PVC	0.02	146	161	2/16	144	164	1:1 Medium Chips	105 142	142 144
MW19	33.9467442	-118.0639072	~55	69.38	Sonic	76	6	2	SCH80 PVC	0.02	56	71	2/16	54	76	95/5 slurry	1	51
-		-				0.5				0.00	7.	-				Medium Chips 95/5 slurry	51	54 70
MW20A	33.9452137	-118.0748847	~60	67.35	Mud	95	10	2	SCH80 PVC	0.02	75	90	2/12	73 	87	Medium Chips	70	73
MW20B	33.9452137	-118.0748847	~60	67.69	Mud	137	10	2	SCH80 PVC	0.02	122	132	2/12	120	137	Medium Chips 1:1	87 89	89 118
																Medium Chips	118	120
MW20C	33.9452137	-118.0748847	~60	77.9	Mud	195	10	2	SCH80 PVC	0.02	180	190	2/12	178	196	Medium Chips 1:1	132 134	134 176
													ļ			Medium Chips 95/5 slurry	176	178
MW21	33.9478069	-118.0797607	~65	49.86	Sonic	84	6	2	SCH80 PVC	0.02	64	79	2/16	61	83	Medium Chips	1 59	59 61
MW22	33.9522296	-118.0771876	~60	61.81	Sonic	94	6	2	SCH80 PVC	0.02	74	89	2/16	71	94	95/5 slurry Medium Chips	1 68	68 71
MW23B	33.9611151	-118.0584936	~37	29.5	Mud	102	10	2	SCH80 PVC	0.02	87	97	2/16	86	99	95/5 slurry Transition Sand	1 85	85
			-				<u> </u>		 							Medium Chips	99	86 102
MW23C	33.9611151	-118.0584936		32.35	Mud	165	10	2	SCH80 PVC	0.02	145	160	2/16	143	162	1:1	102	142
 			 						 		<u> </u>	 	 		 	Transition Sand Medium Chips	142 161	143 164
MW23D	33.9611151	-118.0584936		33.15	Mud	190	10	2	SCH80 PVC	0.02	175	185	2/16	173	190	1:1	164	171
	00.0004000	440.000404	 				0.7-	 	001150 7115	0.00	05		0/40		70	Transition Sand 95/5 slurry	171	173 60
EW-1**	33.9621008	-118.0604647	<u></u>		Mud	80	8.75	4	SCH80 PVC	0.02	65	75	2/12	63	78	Medium Chips	60	63

Notes: 95/5

95% portland cement, 5% benseal bentonite powder Bentonite crumble/#3 Sand Mix (1:1 ratio)

1:1 Pump not to be installed in this well



Table 2. Water Level Measurements June 22, 2006 **Project Completion Report - Well Installation and Groundwater Monitoring** Omega Chemical Operable Unit 2, Whittier, California

Well ID	TOC Elev	DTW (btoc)	Depth to Sediment (btoc)	Measured TD (btoc)	(btoc) TD (bgs) Screen Interval		Estimated Thickness of Sediment (ft) ¹	Head Water (ft) ²	Groundwater Elevation (ft msl) ³
MW-12	220.87	85.44	102.18	102.18	102	82-97	0	16.74	135.43
MW-13A*	206.02	69.36	72.2	72.2	-71	56-66	0	2.84	136.66
MW-13B	205.88	81.75	138.4	138.4	138	123-133	0	56.65	124.13
MW-14	172.63	46.2	79.91	79.91	80	60-75	0	33.71	126.43
MW-15	148.28	24.57	74.95	74.95	75	50-70	0	50.38	123.71
MW-16A	153.19	46.07	65.93	65.93	65	45-60	0	19.86	107.12
MW-16B*	153.26	46.88	117.85	120.19	121	106-116	2.34	70.97	106.38
MW-16C	153.26	49.17	169.7	169.7	169	149-164	0	120.53	104.09
MW-17A	159.03	65.03	75.65	75.67	76	56-71	0.02	10.62	94.00
MW-17B	158.90	64.07	109.3	109.7	109	94-104	0.4	45.23	94.83
MW-17C	159.00	73.54	187.15	187.15	187	172-182	0	113.61	85.46
MW-18A	143.73	26.97	75.95	75.95	76	56-71	0	48.98	116.76
MW-18B	143.83	26.95	105.47	105.47	105	90-100	0	78.52	116.88
MW-18C	143.83	28.94	166.6	166.6	166	146-161	0	137.66	114.89
MW-19	158.73	69.38	74.8	74.8	76	56-71	0	5.42	89.35
MW-20A	141.31	67.35	94.7	94.7	85	75-90	0	27.35	73.96
MW-20B	141.32	67.69	137.7	137.7	137	122-132	0	70.01	73.63
MW-20C	141.35	77.9	195.2	195.2	195	180-190	0	117.3	63.45
MW-21	128.81	49.86	84.8	84.8	84	64-79	0	34.94	78.95
MW-22	150.82	61.81	93.83	93.83	94	74-89	0	32.02	89.01
MW-23B	149.06	28.33	101.4	101.6	102	87-97	0.2	73.07	120.73
MW-23C	149.07	31.08	164.3	164.55	165	145-160	0.25	133.22	117.99
MW-23D	148.04	31.85	189.8	189.8	190	175-185	0	157.95	116.19

Notes:

Constructed TD based on TD reported on boring logs.

Measured TD - water level probe repeatedly oscillated until no change in measured depth.

Note: MW16B redeveloped 7/5/06. TD after development was 119.90'.

TOC top of casing

below top of casing btoc

below ground surface bgs

feet ft

DTW depth to water TD total depth

relative to mean sea level. If >0, then above sea level. msl

^{&#}x27; Measured TD - Depth to Sediment

⁴ Measured TD-DTW

³ Measured TOC-DTW

^{*} Water measured likely residual from attempts at well development.

Table 3. Sample Identification and Tracking Log - Depth Specific Water Samples for VOCs Project Completion Report - Well Installation and Groundwater Monitoring Omega Chemical Operable Unit 2, Whittier, California

					·	T		·	_	I	1			
								Laboratory Analyses Requested						
Operable Unit	Well Location	Sample Medium	Sample Type (0 thru 6)	Sequential Sample No.	Sample Date	Sample Time	Sample Depth (ft bgs)	Date Submitted to Lab	82608	Turn Around Time	Lab Order No.	Date Samples Analyzed	Holding Time (days)	Quality Control
OC2	PMW12	W	4	1	8/8/2005	9:15		8/9/2005	х	7 days	78030	8/11/2005	3	OK
OC2	PMW12	W	2	2	8/8/2005	9:18		8/9/2005	x	7 days	78030	8/11/2005	3	ОК
OC2	PMW12	W	0	3	8/9/2005	8:05	102	8/9/2005	×	24 hours	78030	8/9/2005	0	ОК
OC2	PMW12	W	1	4	8/9/2005	8:09		8/9/2005	×	7 days	78030	8/13/2005	4	ОК
OC2	PMW12	W	3	5	8/9/2005	9:05		8/9/2005	×	7 days	78030	8/11/2005	2	OK
OC2	PMW13	W	4		6/30/2005	7:43		7/1/2005	<u>x</u> _	7 days	77476	7/11/2005	11	OK
OC2	PMW13	W	2	3	7/1/2005	7:00	407	7/1/2005	x	7 days	77476	7/11/2005	10	OK OK
OC2	PMW13	W	0	4	7/1/2005	7:15	127	7/1/2005	<u>x</u>	24 hours	77476	7/11/2005	10	OK OK
OC2	PMW13	W	1	5	7/1/2005	7:15	127	7/1/2005	X	7 days	77476	7/11/2005	10	OK OK
OC2	PMW13	W	3		7/1/2005	7:50		7/1/2005	, X	7 days	77476	7/11/2005	10	OK
OC2	PMW14	W	4	1	5/5/2006	15:30		5/5/2006	X	7 days	84252	5/8/2006	3	************
OC2	PMW14	w	2	2	5/5/2006	15:35		5/5/2006	×	7 days	84252	5/8/2006	3	
OC2	PMW14	w	0	3	5/5/2006	15:40	57	5/5/2006	x	24 hrs	84252	5/5-8/06	#VALUE!	
OC2	PMW14	w	3	4	5/5/2006	15:50		5/5/2006		7 days	84252	5/8/2006	3	
OC2	PMW14	w	4	5	5/6/2006	8:16		5/6/2006	х	7 days	84267	5/8/2006	2	
OC2	PMW14	w	0	6	5/6/2006	8:16	67	5/6/2006	x	24 hrs	84267	5/8/2006	2	i
OC2	PMW14	w	0	7	5/6/2006	10:13	77	5/6/2006	x	24 hrs	84267	5/8/2006	2	
OC2	PMW15	W	4	11	8/10/2005	12:55		8/10/2005	x	7 days	78080	8/16/2005	6	OK OK
OC2	PMW15	W	2	2	8/10/2005	13:04	·	8/10/2005	x	7 days	78080	8/16/2005	6	OK
OC2	PMW15	W	0	3	8/10/2005	15:24	45	8/10/2005	x	24 hours	78080	8/11/2005	11	OK
OC2	PMW15	W	3	4	8/10/2005	15:45		8/10/2005	x	7 days	78080	8/17/2005	7	OK
OC2	PMW15	W	00	5	8/10/2005	17:10	50	8/10/2005	_ x	24 hours	78080	8/11/2005	1	OK
OC2	PMW15	W	4	6	8/11/2005	7:15		8/11/2005	x	7 days	78093	8/17/2005	6	ОК
OC2	PMW15	W	0	7	8/11/2005	7:30	60	8/11/2005	x	24 hours	78093	8/11/2005	0	ОК
OC2	PMW15	W	0	8	8/11/2005	9:25	72	8/11/2005	X	24 hours	78093	8/11/2005	0	ОК
					510410005			5/24/2025						
OC2	PMW16	W	4	1	5/31/2005	7:30	_	5/31/2005	_ X	7 days	76811	6/2/2005	2	OK OK
OC2	PMW16	W	2	2	5/31/2005	7:30		5/31/2005	X	7 days	76811	6/2/2005	2	OK
OC2	PMW16	W	3	3	5/31/2005	8:40		5/31/2005	_ X	7 days	76811	6/2/2005	2	OK
OC2	PMW16	<u> </u>	0	4	5/31/2005	12:56	57	5/31/2005	X	24 hours	76811	6/2/2005	2	OK
OC2	PMW16	W	0	6	5/31/2005	14:30	62	5/31/2005	X	24 hours	76811	6/2/2005	2	OΚ

Table 3. Sample Identification and Tracking Log - Depth Specific Water Samples for VOCs Project Completion Report - Well Installation and Groundwater Monitoring Omega Chemical Operable Unit 2, Whittier, California

					T	r								
								Laboratory Anal Requested	Laboratory Analyses Requested					
Operable Unit	Well Location	Sample Medium	Sample Type (0 thru 6)	Sequential Sample No.	Sample Date	Sample Time	Sample Depth (ft bgs)	Date Submitted to Lab	8260B	Turn Around Time	Lab Order No.	Date Samples Analyzed	Holding Time (days)	Quality Control
OC2	PMW16	w	0	7	5/31/2005	15:50	72	5/31/2005	x	24 hours	76811	6/2/2005	2	OK
OC2	PMW16	w	1	8	5/31/2005	15:50	72	5/31/2005	х	7 days	76811	6/2/2005	2	OK
OC2	PMW16	w	0	9	5/31/2005	17:35	82	5/31/2005	х	24 hours	76811	6/2/2005	2	OK
OC2	PMW16	W	0	10	6/1/2005	8:40	92	6/1/2005	Х	24 hours	76842	6/2/2005	1	ОК
OC2	PMW16	W	4	11	6/1/2005	8:40		6/1/2005	х	7 days	76842	6/2/2005	1	OK
OC2	PMW16	w	0	12	6/1/2005	14:40	123	6/1/2005	х	24 hours	76842	6/2/2005	1	ОК
OC2	PMW16	W	4	13	6/2/2005	8:00		6/2/2005	x	7 days	76867	6/2/2005	0	ОК
OC2	PMW16	W	0	14	6/2/2005	8:08	133	6/2/2005	х	24 hours	76867	6/3/2005	1	ОК
OC2	PMW16	W	0	15	6/2/2005	9:40	142	6/2/2005	х	24 hours	76867	6/3/2005	1	ОК
OC2	PMW16	w	0	16	6/2/2005	15:50	162	6/2/2005	х	24 hours	76867	6/3/2005	1	ОК
OC2	PMW16	W	4	18	6/3/2005	7:00		6/3/2005	х	7 days	76910	6/3/2005	0	ОК
OC2	PMW16	w	0	19	6/3/2005	7:15	172	6/3/2005	х	24 hours	76910	6/3/2005	. 0	ОК
OC2	PMW17	W	4	1	6/21/2005	12:30		6/21/2005	X	7 days	77259	6/30/2005	9	OK
OC2	PMW17	W	2	2	6/21/2005	13:00		6/21/2005	Х	7 days	77259	6/26/2005	5	OK
OC2	PMW17	W	3	3	6/21/2005	13:35		6/21/2005	Х	7 days	77259	6/26/2005	5	OK
OC2	PMW17	w	0	4	6/21/2005	15:10	51.5	6/21/2005	Х.	24 hours	77259	6/23/2005	2	OK
OC2	PMW17	w	4	5	6/22/2005	8:15		6/23/2005	х	7 days	77320	6/27/2005	5	ОК
OC2	PMW17	W	0	6	6/22/2005	14:00	97	6/23/2005	X	24 hours	77320	6/24/2005	2	OK
OC2	PMW17	W	1	7	6/22/2005	14:00		6/23/2005	X	7 days	77320	6/24/2005	2	OK
OC2	PMW17	W	0	8	6/23/2005	7:50	117	6/23/2005	х	24 hours	77320	6/24/2005	1	OK
OC2	PMW17	W	0	9	6/23/2005	14:33	147	6/23/2005	х	24 hours	77320	6/24/2005	1	ОК
OC2	PMW17	W	4	11	6/24/2005	8:45		6/24/2005	х	7 days	77340	6/28/2005	4	OK
OC2	PMW17	W	0	12	6/24/2005	11:29	172	6/24/2005	х	24 hours	77340	6/24/2005	0	OK
OC2	PMW17	W	0	13	6/24/2005	13:55	182	6/24/2005	X	24 hours	77340	6/24/2005	0	ОК
OC2	PMW17	W	4	14	6/27/2005	10:40		6/27/2005	Х	7 days	77381	7/1/2005	4	ОК
OC2	PMW17	W	0	15	6/27/2005	10:40	192	6/27/2005	x	24 hours	77381	7/1/2005	4	ОК
					0/40/2005			0/40/2005						
OC2	PMW18	W	4	1	6/10/2005	7:45		6/10/2005	X	7 days	77039	6/10/2005	0	OK OK
OC2	PMW18	W .	2	2	6/10/2005	7:50		6/10/2005	X	7 days	77039	6/10/2005	0	OK
OC2	PMW18	W	0	3	6/10/2005	15:20	52	6/10/2005	x_	24 hours	77039	6/10/2005	0	OK
OC2	PMW18	W	1	4	6/10/2005	15:20	52	6/10/2005	X	7 days	77039	6/10/2005	0	OK OK
OC2	PMW18	W	4	5	6/13/2005	8:25	<u></u>	6/13/2005	X	7 days	77087	6/13/2005	0	OK _

Table 3. Sample Identification and Tracking Log - Depth Specific Water Samples for VOCs Project Completion Report - Well Installation and Groundwater Monitoring Omega Chemical Operable Unit 2, Whittier, California

														
								Laboratory Anal Requested	yses					
Operable Unit	Well Location	Sample Medium	Sample Type (0 thru 6)	Sequential Sample No.	Sample Date	Sample Time	Sample Depth (ft bgs)	Date Submitted to Lab	8260B	Turn Around Time	Lab Order No.	Date Samples Analyzed	Holding Time (days)	Quality Control
OC2	PMW18	W	0	6	6/13/2005	10:15	67	6/13/2005	х	24 hours	77087	6/14/2005	1	ОК
OC2	PMW18	w	3	8	6/13/2005	10:35		6/13/2005	х	7 days	77087	6/14/2005	1	ок
OC2	PMW18	W	0	9	6/13/2005	12:25	77	6/13/2005	х	24 hours	77087	6/14/2005	1	OK
OC2	PMW18	W	0	10	6/13/2005	16:04	87	6/13/2005	х	24 hours	77087	6/14/2005	1	ОК
OC2	PMW18	W	4	11	6/14/2005	7:30		6/15/2005	x	7 days	7111	6/15/2005	1	ОК
OC2	PMW18	W	0	12	6/14/2005	7:40	97	6/15/2005	х	24 hours	7111	6/15/2005	1	ОК
OC2	PMW18	W	0	14	6/14/2005	13:05	115	6/15/2005	×	24 hours	7111	6/15/2005	1	ОК
OC2	PMW18	W	0	15	6/14/2005	15:30	128	6/15/2005	х	24 hours	7111	6/15/2005	1	OK
OC2	PMW18	W	4	17	6/15/2005	7:45		6/15/2005	×	7 days	77138	6/16/2005	1	ОК
OC2	PMW18	W	3	19	6/15/2005	8:22		6/15/2005	x	7 days	77138	6/17/2005	2	ОК
OC2	PMW18	V	2	20	6/15/2005	8:35		6/15/2005	×	7 days	77138	6/17/2005	2	ОК
OC2	PMW18	8	0	21	6/15/2005	11:00	148	6/15/2005	×	24 hours	77138	6/16/2005	1	ОК
OC2	PMW18	W	0	22	6/15/2005	13:50	158	6/15/2005	×	24 hours	77138	6/16/2005	1	ОК
OC2	PMW18	W	4	23	6/16/2005	7:30		6/16/2005	×	7 days	77152	6/16/2005	0	ОК
OC2	PMW18	W	0	24	6/16/2005	9:50	177	6/16/2005	×	24 hours	77152	6/16/2005	0	ОК
OC2	PMW18	W	0	26	6/16/2005	12:50	187	6/16/2005	х	24 hours	77152	6/16/2005	0	ОК
OC2	PMW19	W	4	1	5/2/2006	16:00		5/3/2006	_x	7 days	84192	5/3/2006	1	
OC2	PMW19	W	2	2	5/2/2006	16:03		5/3/2006	x	7 days	84192	5/3/2006	11	
OC2	PMW19	W	0	3	5/2/2006	16:05	68	5/3/2006	х	24 hrs	84192	5/3/2006	11	
OC2	PMW19	. W	3	4	5/2/2006	16:25		5/3/2006	x	7 days	84192	5/3/2006	1	
OC2	PMW20	W	0		5/18/2006	11:55	73	5/18/2006	////// ×	24 hrs	84501	5/19/2006	//////////////////////////////////////	
OC2	PMW20	W	1	2	5/18/2006	13:00	83	5/18/2006		7 days	84501	5/19/2006	1	
OC2	PMW20		0	3	5/18/2006	13:00	83	5/18/2006		24 hrs	84501	5/19/2006	1	
OC2	PMW20	W	4	4	5/18/2006	13.00		5/18/2006	X	7 days	84501	5/19/2006	1	
OC2	PMW20	W	0	5	5/18/2006	15:30	93	5/18/2006		24 hrs	84501	5/19/2006	<u>'</u>	
OC2	PMW20	W	0	6	5/18/2006	16:40	103	5/19/2006	X	24 hrs	84521	5/22/2006	4	
OC2	PMW20	W	4	7	5/19/2006	8:00		5/19/2006		7 days	84521	5/19/2006	4	
OC2	PMW20	— W	0	8	5/19/2006	9:30	113	5/19/2006	X	24 hrs	84521	5/19/2006	0	
OC2				9	5/19/2006	9:40		5/19/2006	X		84521		0	
OC2	PMW20 PMW20	<u>W</u> _	3		5/19/2006	9:40			Х.	7 days	84521	5/19/2006 5/19/2006	0	
			0	10	5/19/2006	11:35	122	5/19/2006	_ <u>x</u>	7 days				
OC2	PMW20	W	U	11	5/19/2006	11:35	123	5/19/2006	X	24 hrs	84521	5/19/2006	U	

Table 3. Sample Identification and Tracking Log - Depth Specific Water Samples for VOCs
Project Completion Report - Well Installation and Groundwater Monitoring
Omega Chemical Operable Unit 2, Whittier, California

								Laboratory Anal Requested	yses					
Operable Unit	Well Location	Sample Medium	Sample Type (0 thru 6)	Sequential Sample No.	Sample Date	Sample Time	Sample Depth (ft bgs)	Date Submitted to Lab	8260B	Turn Around Time	Lab Order No.	Date Samples Analyzed	Holding Time (days)	Quality Control
OC2	PMW20	W	0	12	5/19/2006	13:35	133	5/19/2006	х	24 hrs	84521	5/19/2006	0	
OC2	PMW20	w	4	13	5/19/2006	15:30		5/19/2006	х	7 days	84531	5/19/2006	0	
OC2	PMW20	W	0	14	5/19/2006	15:35	143	5/19/2006	×	24 hrs	84531	5/19/2006	0	
OC2	PMW20	W	4	15	5/21/2006	8:00		5/22/2006		7 days	84562	5/22/2006	1	
OC2	PMW20	W	0	16	5/21/2006	9:15	153	5/22/2006		24 hrs	84562	5/22/2006	1	
OC2	PMW20	W	1	17	5/21/2006	9:15	153	5/22/2006		24 hrs	84562	5/22/2006	1	
OC2	PMW20	W	0	18	5/21/2006	15:47	183	5/22/2006		24 hrs	84562	5/22/2006	1	
OC2	PMW21	W	4	1	5/1/2006	7:30		5/1/2006	X	7 days	84144	5/1/2006	0	
OC2	PMW21	W	2	2	5/1/2006	7:40		5/1/2006	X	7 days	84144	5/1/2006	0	
OC2	PMW21	W	0	3	5/1/2006	8:15	69	5/1/2006	x	24 hrs	84144	5/1/2006	0	
OC2	PMW21	W	3	4	5/1/2006	8:35		5/1/2006	X	7 days	84144	5/1/2006	0	i
OC2	PMW21	w ////////////////////////////////////	0	5 	5/1/2006	9:55	79	5/1/2006	X	24 hrs	84144	5/1/2006		amanananananananananananananananananana
OC2	PMW22	W	3	1	4/25/2006	13:00		4/26/2006	X	7 days	84061	4/26/2006	1	
OC2	PMW22	w	4	2	4/25/2006		_	4/26/2006	×	7 days	84061	4/26/2006	1	
OC2	PMW22	w	2	3	4/25/2006	13:05		4/26/2006	X	7 davs	84061	4/26/2006	1	
OC2	PMW22	W	0	4	4/26/2006	10:42	68	4/26/2006	X	24 hrs	84061	4/26/2006	0	
OC2	PMW22	W	1	5	4/26/2006	10:43	68	4/26/2006	x	24 hrs	84061	4/26/2006	0	
OC2	PMW22	w	0	6	4/26/2006	13:40	78	4/26/2006	×	24 hrs	84061	4/26/2006	0	
OC2	PMW22	W	0	7	4/26/2006	16:40	88	4/26/2006	_ <u>x</u>	24 hrs	84065	4/27/2006	1	
OC2	PMW22	w	4	8	4/26/2006	16:45		4/26/2006	x	7 days	84065	4/27/2006	1	
VIIIIIII									TÜÜ İ	anniinuu a				
OC2	PMW23	W	3	1	5/16/2005	13:25		5/17/2005	X	7 days	76515	5/17/2005	1	OK
OC2	PMW23	W	4	2	5/16/2005	13:30	_	5/17/2005	_x	7 days	76515	5/17/2005	1	ОК
OC2	PMW23	W	0	3	5/16/2005	18:21	42	5/17/2005	x	24 hours	76515	5/17/2005	1	OK
OC2	PMW23	W	4	4	5/17/2005	7:30		5/17/2005	х	7 days	76527	5/18/2005	1	ОК
OC2	PMW23	W	0	5	5/17/2005	13:20	52	5/17/2005	x	24 hours	76527	5/18/2005	1	ОК
OC2	PMW23	W	0	7	5/17/2005	16:20	62	5/17/2005	X	24 hours	76527	5/18/2005	1	OK
OC2	PMW23	W	2	8	5/17/2005	16:25		5/17/2005	X	7 days	76527	5/18/2005	1	ОК
OC2	PMW23	W	2	11	5/18/2005	7:20			x	7 days	76549	5/19/2005	1	ОК
OC2	PMW23	W	4	12	5/18/2005	7:40			x	7 days	76549	5/19/2005	1	ок
OC2	PMW23	W	0	13	5/18/2005	13:05	82		x	24 hours	76549	5/19/2005	1	ОК
OC2	PMW23	W	1	14	5/18/2005	13:05			×	7 days	76549	5/19/2005	1	ОК

Table 3. Sample Identification and Tracking Log - Depth Specific Water Samples for VOCs Project Completion Report - Well Installation and Groundwater Monitoring Omega Chemical Operable Unit 2, Whittier, California

			Sample				Sample	Laboratory Ana Requested Date	-	Turn		Date	Holding	Quality
Operable Unit	Well Location	Sample Medium	Type (0 thru 6)	Sequential Sample No.	Sample Date	Sample Time	Depth (ft bgs)	Submitted to Lab	8260B	Around Time	Lab Order No.	Samples Analyzed	Time (days)	Control
OC2	PMW23	W	0	16	5/18/2005	14:28	92		х	24 hours	76549	5/19/2005	1	ОК
OC2	PMW23	W	0	21	5/19/2005	7:20	132	5/19/2005	×	24 hours	76580	5/19/2005	0	OK
OC2	PMW23	W	4	23	5/19/2005	7:40		5/19/2005	x	7 days	76580	5/19/2005	0	OK
OC2	PMW23	W	4	24	5/20/2005	8:00		5/20/2005	_x	7 days	76607	5/21/2005	1	OK
OC2	PMW23	W	2	25	5/20/2005	8:05		5/20/2005	х	7 days	76607	5/21/2005	1	OK_
OC2	PMW23	W	0	26	5/20/2005	11:32	142	5/20/2005	х	24 hours	76607	5/23/2005	3	ОК
OC2	PMW23	W	3	28	5/20/2005	11:47		5/20/2005	x	7 days	76607	5/22/2005	2	ОК
OC2	PMW23	W	0	29	5/20/2005	12:52	152	5/20/2005	х	24 hours	76607	5/23/2005	3	ОК
OC2	PMW23	W	4	31	5/23/2005	8:00		5/23/2005	_ x	7 days	76632	5/23/2005	0	ОК
OC2	PMW23	W	0	32	5/23/2005	8:45	162	5/23/2005	x	24 hours	76632	5/23/2005	0	OK
OC2	PMW23	W	0	34	5/23/2005	13:40	172	5/23/2005	х	24 hours	76649	5/24/2005	1	OK
OC2	PMW23	W	0	36	5/23/2005	16:40	182	5/23/2005	х	24 hours	76649	5/24/2005	1	ОК
OC2	PMW23	W	1	37	5/23/2005	16:45	182	5/23/2005	х	7 days	76649	5/24/2005	1	ОК
OC2	PMW23	W	4	38	5/23/2005	16:50		5/23/2005	х	7 days	76649	5/24/2005	1	ОК
OC2	PMW23	W	4	39	5/24/2005	14:40		5/24/2005	х	7 days	76671	5/24/2005	0	OK
OC2	PMW23	W	0	40	5/24/2005	15:20	192	5/24/2005	x	24 hours	76671	5/24/2005	0	OK
OC2	PMW23	W	3	41	5/24/2005	15:30		5/24/2005	х	7 days	76671	5/24/2005	0	ОК

Notes

Sample Medium - W - water

Sample Type :

0 Primary Sample

Duplicate Sample

Field Blank

B Equipment Blank

Trip Blank

ft bgs - feet below ground surface

Table 4. Summary of Chemical Analyses for Depth Specification Samples
Project Completion Report - Well Installation Groundwater Monitoring Report
Omega Chemical Operable Unit 2, Whittier, California

Omega Chem	<u>nical Oper</u>	<u>able Uni</u>	<u>t 2, Whittier, Califo</u>	rnia																		
Sample ID	Sample Depth (feet bgs)	Sample Date	Sample Description	Lab Order No.	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3- chloropropane	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene
OC2-PMW12-W-4-01		8/8/05	Trip Blank	78030	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50
OC2-PMW12-W-2-02		8/8/05	Field Blank		ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW12-W-0-03	102		Primary		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	19	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50
OC2-PMW12-W-1-04	102			78030	ND <0.50		ND <0.50	ND <0.50	ND <0.50	12	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50
OC2-PMW12-W-3-05		8/9/05	Equipment Blank	78030	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW13-W-4-01		6/30/05	Trip Blank		ND < 0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW13-W-2-03					ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW13-W-0-04	127				ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW13-W-1-05	127				ND < 0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50		ND <0.50
OC2-PMW13-W-3-06					ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50			ND <0.50	ND <0.50
OC2-PMW14-W-4-01			Trip Blank		ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW14-W-2-02		5/5/06	Field Blank	84252	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW14-W-0-03		5/5/06	Primary		ND <0.50		ND <0.50	ND <0.50	0.38 J	110	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.2	ND <0.50	ND <0.50	ND <0.50
OC2-PMW14-W-3-04	-	5/5/06	Equipment Blank		ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50
OC2-PMW14-W-4-05 OC2-PMW14-W-0-06	 		Trip Blank Primary		ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 0.68	ND <0.50	ND <0.50	ND <0.50	ND <0.50	2.6	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 0.20 J	ND <0.50 ND <0.50
OC2-PMW14-W-0-07	 				ND <0.50		ND <0.50	ND <0.50	ND <0.50	34	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.24 J	ND <0.50	ND <0.50	ND <0.50	0.90	ND <0.50	ND <0.50	ND <0.50
										3 1						7						1.
OC2-PMW15-W-4-01	 		Trip Blank		ND <0.50			ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW15-W-2-02 OC2-PMW15-W-0-03	A.E.	8/10/05	Field Blank	78080 78080	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 9.4	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50
OC2-PMW15-W-3-04	45		Equipment Blank	78080	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW15-W-0-05	50	8/10/05			ND <0.50		ND <0.50	ND <0.50	3	990	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	12	ND <0.50	ND <0.50	ND <0.50
OC2-PMW15-W-4-06	 " -		Trip Blank	78093	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW15-W-0-07	60	8/11/05	Primary	78093	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.85	170	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	3.8	ND <0.50	ND <0.50	ND <0.50
OC2-PMW15-W-0-08	72	8/11/05	Primary	78093	ND <0.50	ND <0.50	ND <0.50	ND <0.50	2.6	660	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	7.7	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-4-01	:: 0 W W . v .	5/31/05	Trip Blank	76811	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-2-02			Field Blank	76811	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-3-03	1	5/31/05	Equipment Blank	76811	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-0-04	57	5/31/05	Primary	76811	ND <0.50	ND <0.50	ND <0.50	ND <0.50	8.2	30	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-0-06	62			76811	ND <0.50	ND <0.50	ND <0.50	ND <0.50	27	19	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-0-07	72	5/31/05	 	76811	ND <0.50	ND <0.50	ND <0.50	ND <0.50	4.3	9.3	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-1-08	72 82	5/31/05	Duplicate	76811 76811	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	2.2	8.9 2.5	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50
OC2-PMW16-W-0-09 OC2-PMW16-W-0-10		5/31/05 6/1/05			ND < 0.50		t=	ND <0.50	ND <0.50		ND <0.50		 	ND <0.50		-				-	ND <0.50	
OC2-PMW16-W-4-11	+ -		Trip Blank		ND <0.50 ND <0.50			ND <0.50 ND <0.50		ND <0.50	ND <0.50			ND <0.50		ND <0.50	ND <0.50				ND <0.50	
OC2-PMW16-W-0-12	123		Primary		ND <0.50			ND <0.50	ND <0.50	ND <0.50	ND <0.50			ND <0.50	ND <0.50	ND <0.50	ND <0.50		+			ND <0.50
OC2-PMW16-W-4-13			Trip Blank		ND <0.50				ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50			ND <0.50
OC2-PMW16-W-0-14	133		Primary	76867	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-0-15	142		Primary						ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50			ND <0.50
OC2-PMW16-W-0-16	162		Primary						ND <0.50	ND <0.50	ND <0.50			ND <0.50		ND <0.50	ND <0.50		ND <0.50			ND <0.50
OC2-PMW16-W-4-18	1 470		Trip Blank		ND <0.50				ND <0.50	ND <0.50	ND <0.50			ND <0.50		ND <0.50						ND <0.50
OC2-PMW16-W-0-19	172	~~ «	Primary	25 900	ND <0.50		The state of the state of		31 111	ND <0.50		2	· 107 W	· W., * * . * . *	2	ND <0.50	*::. ""	141				ND <0.50
OC2-PMW17-W-4-01			Trip Blank			ND <0.50		ND <0.50		ND <0.50		ND <0.50		ND <0.50		ND <0.50	ND <0.50		ND <0.50			ND <0.50
OC2-PMW17-W-2-02	_		Field Blank			ND <0.50			ND <0.50	ND <0.50				ND <0.50		ND <0.50	ND <0.50					ND <0.50
OC2-PMW17-W-3-03	1 54 5	6/21/05	Equipment Blank	77259						ND <0.50	ND <0.50		ND <0.50	ND <0.50		ND <0.50	ND <0.50					ND <0.50
OC2-PMW17-W-0-04 OC2-PMW17-W-4-05	51.5	6/22/05	Primary Trip Blank	77259	ND < 0.50	ND <0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50
17-VV-4-05	<u> </u>	0/22/05	Luth Biglik	11320	14D -0.00	14D 20:00	טפיט~ חגון	חפיה אוד	ND <0.50	טפיטר מאון	T MD >0.00	TIAD ~0.90	טפ.טר טאון	140 -0.00	1110 -0.00	1110 70.00	1140 -0.00	1140 -0.00	1110 -0.00	1140 -0.00	110 70.00	140 70.00

Table 4. Summary of Chemical Analyses for Depth Specification Samples
Project Completion Report - Well Installation Groundwater Monitoring Report
Omega Chemical Operable Unit 2, Whittier, California

Omega Chen	nical Oper	able Uni	it 2, Whittier, Califo	ornia																		
Sample ID	Sample Depth (feet bgs)	Sample Date	Sample Description	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chlorotoluene	4-Chlorotoluene	4-Isopropyltoluene	Benzene	Bromobenzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochioromethane
OC2-PMW12-W-4-01	<u> </u>	8/8/05	Trip Blank	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW12-W-2-02		8/8/05	Field Blank	ND < 0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50						
OC2-PMW12-W-0-03	102	8/9/05	Primary	ND < 0.50	ND <0.50	0.55	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.67	ND <0.50	ND <0.50	ND <0.50	ND <0.50				
OC2-PMW12-W-1-04	102		Duplicate	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.58	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW12-W-3-05			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50								
OC2-PMW13-W-4-01			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW13-W-2-03			Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.87		ND <0.50	ND <0.50	ND <0.50								
OC2-PMW13-W-0-04	127		Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW13-W-1-05 OC2-PMW13-W-3-06	127	7/1/05	Duplicate	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
			Equipment Blank	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.78	ND <0.50	ND <0.50	ND <0.50	ND < 0.50
OC2-PMW14-W-4-01		5/5/06	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW14-W-2-02			Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW14-W-0-03	 		Primary	ND <0.50	0.17 J	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	2.3	ND <0.50	1.2	ND <0.50	ND <0.50					
OC2-PMW14-W-3-04 OC2-PMW14-W-4-05			Equipment Blank	ND <0.50	ND < 0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50							
OC2-PMW14-W-0-06	+ —	5/6/06 5/6/06	Trip Blank Primary	ND <0.50 ND <0.50	ND <0.50 2.4	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	0.46 J	ND <0.50	ND <0.50	ND <0.50	8.6							
OC2-PMW14-W-0-07			Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	0.55	2.3	ND <0.50	ND <0.50	ND <0.50	ND <0.50	8.3	ND <0.50	0.23 J	ND <0.50	1.5
OC2-PMW15-W-4-01 OC2-PMW15-W-2-02			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50								
OC2-PMW15-W-0-03	45	8/10/05	Field Blank	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.8	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW15-W-3-04	1 40		Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW15-W-0-05	50		Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	180	ND <0.50	6.6	ND <0.50	ND <0.50								
OC2-PMW15-W-4-06			<u>-</u>	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW15-W-0-07	60	8/11/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	39	ND <0.50	1.9	ND <0.50	ND <0.50								
OC2-PMW15-W-0-08	72	8/11/05	Primary	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	110	ND <0.50	3.2	ND <0.50	ND <0.50						
OC2-PMW16-W-4-01		5/31/05	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW16-W-2-02			Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW16-W-3-03		5/31/05	Equipment Blank	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-0-04	57	5/31/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	26	ND <0.50	ND <0.50								
OC2-PMW16-W-0-06	62	5/31/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	46	ND <0.50	ND <0.50								
OC2-PMW16-W-0-07 OC2-PMW16-W-1-08	72		Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	1.2	ND <0.50	4	ND <0.50	ND <0.50 ND <0.50								
OC2-PMW16-W-0-09	82	5/31/05	Duplicate Priman	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	2.2	ND <0.50 ND <0.50	ND <0.50
OC2-PMW16-W-0-10	92	6/1/05		ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-4-11	 _ ~ _		Trip Blank	ND <0.50	ND <0.50	ND <0.50				ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-0-12	123	6/1/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-4-13			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50			ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-0-14	133	6/2/05		ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50					
OC2-PMW16-W-0-15	142	6/2/05		ND <0.50	ND <0.50	ND <0.50	·	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-0-16	162	6/2/05		ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	·	ND <0.50	ND <0.50				
OC2-PMW16-W-4-18 OC2-PMW16-W-0-19	170		Trip Blank	ND <0.50	ND <0.50			ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50
	172	6/3/05	Primary				ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW17-W-4-01	-		Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50								
OC2-PMW17-W-2-02	 		Field Blank	ND <0.50	4			ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50				
OC2-PMW17-W-3-03 OC2-PMW17-W-0-04	51 5	6/21/05	Equipment Blank	ND <0.50				ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	·	ND <0.50 ND <0.50	ND <0.50 ND <0.50				
OC2-PMW17-W-4-05	51.5		Trip Blank	ND <0.50 ND <0.50		ND <0.50 ND <0.50				ND <0.50 ND <0.50	ND < 0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50					ND <0.50		
	<u> </u>	J. 22.00	···· Profile	140 -0.00	1110 -0.00	1.10 -0.50	140 70.00	חמיחי חאין	טפיטר מאין	T 14D -0.00	טטייר מאון	1.10 -0.00	1140 40.00	115 -0.00	1715 70.00	1.15 10.00	110 10.00	1.12 10.00	1.12 .0.00	1.45 -0.00	1.15 0.00	<u> </u>

G:\APROJECT\Omega Chemical\Reports\PCR-WIGWM\Table 4 - Summary of Analytical Results.xls

Table 4. Summary of Chemical Analyses for Depth Specification Samples
Project Completion Report - Well Installation Groundwater Monitoring Report
Omega Chemical Operable Unit 2, Whittier, California

Omega Chem	nical Oper	able Uni	<u>t 2, Whittier, Califo</u>	ornia																	
Sample ID	Sample Depth (feet bgs)	Sample Date	Sample Description	Dibromomethane	Dichlorodifluoromethane (Freon 113)	Ethylbenzene	Isopropylbenzene	Xylenes	Methylene Chloride	n-Butylbenzene	n-Propylbenzene	Naphthalene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethene	Trichloroethylene	Trichlorofluoromethane (Freon 11)	Vinyl Chloride
OC2-PMW12-W-4-01	 	8/8/05	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW12-W-2-02	1	8/8/05	Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50
OC2-PMW12-W-0-03	102	8/9/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	3.1	ND <0.50	ND <0.50	470	ND <0.50	ND <0.50						
OC2-PMW12-W-1-04	102	8/9/05	Duplicate	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND < 0.50	ND <0.50	1.9	ND <0.50	ND <0.50	400	ND <0.50	ND <0.50				
OC2-PMW12-W-3-05			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND < 0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50						
OC2-PMW13-W-4-01			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50		ND <0.50								
OC2-PMW13-W-2-03		7/1/05	Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW13-W-0-04	127	7/1/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	1.6	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50
OC2-PMW13-W-1-05	127	7/1/05	Duplicate	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.6	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW13-W-3-06			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND < 0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50							
OC2-PMW14-W-4-01		5/5/06	<i>Tr</i> ip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	0.26	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50							
OC2-PMW14-W-2-02	<u> </u>		Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW14-W-0-03	 		Primary	ND <0.50	0.43 J	ND <0.50	ND <0.50	ND <1.0	ND <0.50	200	ND <0.50	ND <0.50	51	110	ND <0.50						
OC2-PMW14-W-3-04		1	Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW14-W-4-05		5/6/06	Trip Blank	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50
OC2-PMW14-W-0-06		5/6/06	Primary	ND < 0.50	ND < 0.50	3.3	0.21 J	18.4	ND <0.50	ND <0.50	0.81	0.16	ND <0.50	ND <0.50	ND <0.50	1.2	4.2	ND <0.50	0.37	0.55	ND <0.50
OC2-PMW14-W-0-07			Primary	0.51	ND <0.50	0.89	ND <0.50	3.5	ND <0.50	ND <0.50	0.23	0.12	ND <0.50	ND <0.50	ND <0.50	48	1.3	ND <0.50	21	43	ND <0.50
OC2-PMW15-W-4-01		8/10/05	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW15-W-2-02		1	Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW15-W-0-03	45	8/10/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	57	ND <0.50	ND <0.50	8.3	3.8	ND <0.50						
OC2-PMW15-W-3-04		8/10/05	Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50				
OC2-PMW15-W-0-05	50	8/10/05	Primary	ND <0.50	2.1	ND <0.50	ND <0.50	ND <1.0	ND <0.50	1300	ND <0.50	1.3	410	470	ND <0.50						
OC2-PMW15-W-4-06		8/11/05	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <1.0	ND <0.50	ND < 0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50						
OC2-PMW15-W-0-07	60	8/11/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	220	1.4	ND <0.50	120	71	ND <0.50						
OC2-PMW15-W-0-08	72 2000	8/11/05	Primary	ND <0.50	3.4	ND < 0.50	ND <0.50	ND <1.0	ND <0.50	810	ND <0.50	0.85	180	430	ND <0.50						
OC2-PMW16-W-4-01		5/31/05	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-2-02		5/31/05	Field Blank	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <1.0	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW16-W-3-03		5/31/05	Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND < 0.50	ND < 0.50	ND <0.50 ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50						
OC2-PMW16-W-0-04	57	5/31/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	39	ND <0.50	ND <0.50	14	0.64	ND <0.50						
OC2-PMW16-W-0-06	62	5/31/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	21	ND <0.50	ND <0.50	8.5	ND <0.50	ND <0.50						
OC2-PMW16-W-0-07	72	5/31/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	46	ND <0.50	ND <0.50	38	4.8	ND <0.50						
OC2-PMW16-W-1-08	72		Duplicate	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	46	ND <0.50	ND <0.50	38	4.8	ND <0.50						
OC2-PMW16-W-0-09 OC2-PMW16-W-0-10	82 92	5/31/05 6/1/05		ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND < 0.50	14 ND <0.50	ND <0.50 ND <0.50	ND <0.50	16 0.54	1.4	ND <0.50
OC2-PMW16-W-4-11	32		Trip Blank	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50
OC2-PMW16-W-0-12	123	6/1/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0 ND <1.0	ND <0.50 ND <0.50	ND <0.50	2.3	ND <0.50	ND <0.50								
OC2-PMW16-W-4-13	† '		Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW16-W-0-14	133		Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	21	ND <0.50	ND <0.50								
OC2-PMW16-W-0-15	142	1	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	1.3	ND <0.50	ND <0.50								
OC2-PMW16-W-0-16	162	6/2/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	1.2	ND <0.50	ND <0.50								
OC2-PMW16-W-4-18			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND < 0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50					
OC2-PMW16-W-0-19	172	6/3/05	Primary	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW17-W-4-01			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW17-W-2-02	T		Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW17-W-3-03			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW17-W-0-04	51.5	6/21/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW17-W-4-05		6/22/05	Trip Blank		ND <0.50		ND <0.50	ND <1.0		ND <0.50	ND <0.50			ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50

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Table 4. Summary of Chemical Analyses for Depth Specification Samples
Project Completion Report - Well Installation Groundwater Monitoring Report
Omega Chemical Operable Unit 2, Whittier, California

		Cai Opera	DIE OIIII	2, Whittier, Califo	IIIIa												 _		,			,	;
	Sample ID	Sample Depth (feet bgs)	Sample Date	Sample Description	Lab Order No.	1,1,1,2- Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2- Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3- chloropropane	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene
lo	2-PMW17-W-0-06	97	6/22/05	Primary	77320	ND <0.50	9	ND <0.50	ND <0.50	11	75	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
11	22-PMW17-W-1-07			Duplicate	77320	ND <0.50	9	ND <0.50	ND <0.50	11	75	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	2-PMW17-W-0-08		6/23/05	'		ND <0.50		ND <0.50	ND <0.50	ND <0.50	1	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50
	C2-PMW17-W-0-09		6/23/05		77320	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50				
	22-PMW17-W-4-11		6/24/05	Trip Blank	77340	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50
	2-PMW17-W-0-12	172	6/24/05	Primary	77340	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	C2-PMW17-W-0-13		6/24/05	_ 	77340	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	22-PMW17-W-4-14			Trip Blank	77381	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	C2-PMW17-W-0-15			Primary		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
Jõ	2-PMW18-W-4-01			Trip Blank		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	2-PMW18-W-2-02		6/10/05	Field Blank	77039	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	2-PMW18-W-0-03	52	6/10/05	Primary	77039	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
<u> </u> 0	2-PMW18-W-1-04	52	6/10/05	Duplicate	77039	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
- 11-	C2-PMW18-W-4-05			Trip Blank	77087	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	C2-PMW18-W-0-06	67	6/13/05	Primary	77087	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	C2-PMW18-W-3-08			Equipment Blank		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	22-PMW18-W-0-09		6/13/05			ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	C2-PMW18-W-0-10		6/13/05		77087	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	22-PMW18-W-4-11			Trip Blank		ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
1177	C2-PMW18-W-0-12		6/14/05	<u>-</u>		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
15-	C2-PMW18-W-0-14 C2-PMW18-W-0-15		6/14/05		77111	ND < 0.50	ND <0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50
n -	22-PMW18-W-4-17		6/14/05	Trip Blank	77138	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
11	22-PMW18-W-3-19			Equipment Blank	77138	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
11-	22-PMW18-W-2-20			Field Blank	77138	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
11-	22-PMW18-W-0-21		6/15/05		77138	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
13	C2-PMW18-W-0-22		6/15/05		77138	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	C2-PMW18-W-4-23			Trip Blank	77152	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50
	C2-PMW18-W-0-24	177	6/16/05	Primary	77152	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	C2-PMW18-W-0-26		6/16/05	Primary	77152	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	C2-PMW19-W-4-01		5/2/06	Trip Blank	84192	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
11-	22-PMW19-W-2-02		5/2/06	Field Blank	84192	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
и—	C2-PMW19-W-0-03			Primary		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.73	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
	22-PMW19-W-3-04		5/2/06	Equipment Blank	84192	ND <0.50	ND <0.50	ND <0.50	ND <0.50			ND <0.50		ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50
	22 DMM/20 MM 0 04															NID <0.50	ND <0.50	ND <0.50	NID < 0.50			NID <0.50	ND <0.50
- 11	C2-PMW20-W-0-01 C2-PMW20-W-1-02		5/18/06	Duplicate		ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	7.8	35 61	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50		ND <0.50 ND <0.50	ND <0.50 ND <0.50	0.88 1.4	3.2 4.5	ND <0.50 ND <0.50	ND <0.50 ND <0.50
- 11	22-PMW20-W-0-03		5/18/06			ND <0.50	ND <0.50	ND <0.50	ND <0.50	7.7	60	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.3	4.5	ND <0.50	ND <0.50
- 11-	22-PMW20-W-4-04			Trip Blank		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
- 11-	22-PMW20-W-0-05		5/18/06			ND <0.50	ND <0.50	ND <0.50	ND <0.50	7.8	59	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.3	4.3	ND <0.50	ND <0.50
- 11−	C2-PMW20-W-0-06		5/19/06		84521	ND <0.50	ND <0.50	ND <0.50	ND <0.50	6.0	68	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.6	5.4	ND <0.50	ND <0.50
- 11-	2-PMW20-W-4-07			Trip Blank		ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50
	2-PMW20-W-0-08		5/19/06			ND < 0.50	ND <0.50	ND <0.50	ND <0.50	1.8	8.5	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50		ND < 0.50	ND <0.50	2.2	ND < 0.50	ND <0.50	ND <0.50
O	C2-PMW20-W-2-09		5/19/06	Field Blank	84521	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
- 11	C2-PMW20-W-3-10			Equipment Blank	84521	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
11	22-PMW20-W-0-11		5/19/06	Primary		ND <0.50	ND <0.50	ND <0.50	ND <0.50	2.6	13	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.8	0.84	ND <0.50	ND <0.50
- ⊪-	22-PMW20-W-0-12		5/19/06		84521	ND <0.50	ND <0.50	ND <0.50	ND <0.50	2.4	11	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.5	0.62	ND <0.50	ND <0.50
	2-PMW20-W-4-13			Trip Blank		ND <0.50		ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
<u></u>	C2-PMW20-W-0-14		5/19/06	Primary	84531	ND <0.50	ND <0.50	ND <0.50	ND <0.50	3.1	19	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.9	1.2	ND <0.50	ND <0.50

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Table 4. Summary of Chemical Analyses for Depth Specification Samples
Project Completion Report - Well Installation Groundwater Monitoring Report
Omega Chemical Operable Unit 2, Whittier, California

Omega Cher	nical Oper	able Unit	2, Whittier, Califo	rnia																		
Sample ID	Sample Depth (feet bgs)	Sample Date	Sample Description	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chlorotoluene	4-Chlorotoluene	4-Isopropyltoluene	Benzene	Bromobenzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane
ŌĈ2-PMW17-W-0-06	97	6/22/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1,6	ND <0.50	30	ND <0.50	ND <0.50									
OC2-PMW17-W-1-07			Duplicate	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.6	ND <0.50	30	ND <0.50	ND <0.50									
OC2-PMW17-W-0-08	117	6/23/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.55	ND <0.50	ND <0.50									
OC2-PMW17-W-0-09	147	6/23/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW17-W-4-11		6/24/05	Trip Blank	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50					
OC2-PMW17-W-0-12	172		Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW17-W-0-13	182		Primary	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND < 0.50	ND <0.50 ND <0.50									
OC2-PMW17-W-4-14 OC2-PMW17-W-0-15	192	6/27/05 6/27/05	Trip Blank Primary	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50									
OC2-PMW18-W-4-01			Trip Blank	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-2-02 OC2-PMW18-W-0-03			Field Blank	ND <0.50 ND <0.50	ND < 0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	0.85 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50				
OC2-PMW18-W-1-04	52 52	6/10/05	Primary Duplicate	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50				
OC2-PMW18-W-4-05	- 32	6/13/05	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-0-06	67	·	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-3-08	1	6/13/05	Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.74	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-0-09	77	6/13/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-0-10	87	6/13/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-4-11		6/14/05	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-0-12 OC2-PMW18-W-0-14	97	6/14/05		ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50									
OC2-PMW18-W-0-15	115	6/14/05 6/14/05		ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50									
OC2-PMW18-W-4-17	120		Primary Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-3-19			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-2-20			Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-0-21	148	6/15/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-0-22	158	6/15/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-4-23			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-0-24	177	6/16/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW18-W-0-26	187	6/16/05	Primary	ND <0.50	1.5	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW19-W-4-01			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW19-W-2-02			Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW19-W-0-03 OC2-PMW19-W-3-04		5/2/06	Equipment Blank	ND <0.50 ND <0.50			ND <0.50	1.6 ND <0.50	5.3	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	4.6 ND < 0.50				
										ND <0.50	WD <0.30		ND <0.50									
OC2-PMW20-W-0-01		5/18/06		ND <0.50	ND <0.50			ND <0.50			ND <0.50	ND <0.50	ND <0.50	ND <0.50	· · · · · · · · · · · · · · · · · · ·	ND <0.50	ND <0.50	0.62	ND <0.50	7.0		ND <0.50
OC2-PMW20-W-1-02 OC2-PMW20-W-0-03		5/18/06 5/18/06		ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	1.1	ND <0.50 ND <0.50	11	ND <0.50	ND <0.50					
OC2-PMW20-W-0-03			Primary Trip Blank	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50		ND <0.50 ND <0.50	ND <0.50 ND <0.50	0.93 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	11 ND <0.50	ND <0.50 ND <0.50	0.52 ND <0.50
OC2-PMW20-W-0-05	 	5/18/06		ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.2	ND <0.50	9.5	ND <0.50	ND <0.50					
OC2-PMW20-W-0-06		5/19/06		ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.4	ND <0.50	3.5	ND <0.50	ND <0.50					
OC2-PMW20-W-4-07		5/19/06	Trip Blank	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50					
OC2-PMW20-W-0-08		5/19/06		ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.88	ND <0.50	0.59	ND <0.50	ND <0.50					
OC2-PMW20-W-2-09			Field Blank	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50					
OC2-PMW20-W-3-10			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW20-W-0-11		5/19/06		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.84	ND <0.50	0.79	ND <0.50	ND <0.50									
OC2-PMW20-W-0-12 OC2-PMW20-W-4-13		5/19/06	Primary Trip Blank	ND < 0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50			ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	0.71 ND <0.50	ND <0.50 ND <0.50	0.97 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50
OC2-PMW20-W-0-14		5/19/06 5/19/06		ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50			ND <0.50		ND <0.50	6.80	ND <0.50	0.91		ND <0.50				
	<u> </u>	37 13700	·······································	110 -0.00	1.45 -0.00	1.40 -0.00	T (4D >0.00	טטיטר מאין	1140 -0.00	1140 -0.00	1,40,40,00	1110 10.00	1110 10.00	1.15 .0.00	1	1.10 0.00	1.10 0.00	1	1.12 .0.00	1	1.12 0.00	1

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Table 4. Summary of Chemical Analyses for Depth Specification Samples
Project Completion Report - Well Installation Groundwater Monitoring Report
Omega Chemical Operable Unit 2, Whittier, California

Omega Chen	<u>nical Oper</u>	able Uni	t 2, Whittier, Califo	rnia	,									T					· · · · · · · · · · · · · · · · · · ·		
Sample ID	Sample Depth (feet bgs)	Sample Date	Sample Description	Dibromomethane	Dichlorodifluoromethane (Freon 113)	Ethylbenzene	Isopropylbenzene	Xylenes	Methylene Chloride	n-Butylbenzene	n-Propylbenzene	Naphthalene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethene	Trichloroethylene	Trichlorofluoromethane (Freon 11)	Vinyl Chloride
OC2-PMW17-W-0-06	97	6/22/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	240	ND <0.50	ND <0.50	130	23	ND <0.50						
OC2-PMW17-W-1-07			Duplicate	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND <0.50	220	ND <0.50	ND <0.50	120	23	ND <0.50
OC2-PMW17-W-0-08	117	6/23/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	5.2	ND <0.50	ND <0.50	27	0.56	ND <0.50						
OC2-PMW17-W-0-09	147	6/23/05	Primary	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW17-W-4-11			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW17-W-0-12	172	6/24/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	0.83	ND <0.50	ND <0.50	15	ND <0.50	ND <0.50						
OC2-PMW17-W-0-13	182	6/24/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	0.89	ND <0.50	ND <0.50	10 ND <0.50	ND <0.50 ND <0.50	ND <0.50						
OC2-PMW17-W-4-14 OC2-PMW17-W-0-15	192	6/27/05	Trip Blank	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <1.0 ND <1.0	ND <0.50 ND <0.50	ND <0.50 ND <0.50	1.2	ND <0.50	ND <0.50 ND <0.50								
		111111111111111111111111111111111111111		11111111111111111111111111111111111111	W < 0.50	MD < 0.50					140 < 0.50	MD < 0.30	100 < 0.50	MIIIIIIIIII			7/////////////////////////////////////				
OC2-PMW18-W-4-01		~	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW18-W-2-02			Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW18-W-0-03	52	6/10/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW18-W-1-04 OC2-PMW18-W-4-05	52	6/10/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50
OC2-PMW18-W-0-06	67		Trip Blank	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <1.0 ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	1.1	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50				
OC2-PMW18-W-3-08	01	6/13/05 6/13/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW18-W-0-09	77	6/13/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	1.2	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50						
OC2-PMW18-W-0-10	87	6/13/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	0.96	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50						
OC2-PMW18-W-4-11			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW18-W-0-12	97	6/14/05	Primary	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <1.0	ND < 0.50	ND <0.50	ND < 0.50	0.54	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50				
OC2-PMW18-W-0-14	115	6/14/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	0.57	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50						
OC2-PMW18-W-0-15	128	6/14/05	Primary	ND < 0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	1.2	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW18-W-4-17			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW18-W-3-19			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW18-W-2-20	140		Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW18-W-0-21 OC2-PMW18-W-0-22	148	6/15/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50
OC2-PMW18-W-4-23	158	6/15/05	Trip Blank	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <1.0 ND <1.0	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW18-W-0-24	177	6/16/05	 '	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW18-W-0-26	187	6/16/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW19-W-4-01 OC2-PMW19-W-2-02			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW19-W-0-03			Field Blank Primary	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <1.0 5.7	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND < 0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50		ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50
OC2-PMW19-W-3-04		5/2/06	Equipment Blank				ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50			ND <0.50	ND <0.50			ND <0.50	ND <0.50		ND <0.50
OC2-PMW20-W-0-01		5/18/06		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	15	ND <0.50	ND <0.50	20	ND <0.50	ND <0.50						
OC2-PMW20-W-1-02 OC2-PMW20-W-0-03		5/18/06	Duplicate Primany	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50 ND <0.50	ND < 0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	40 39	ND <0.50 ND <0.50	ND <0.50 ND <0.50	46	4.2	ND <0.50 ND <0.50
OC2-PMW20-W-4-04	 		Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <1.0 ND <1.0	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW20-W-0-05		5/18/06		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	40	ND <0.50	ND <0.50	50	5.0	ND <0.50						
OC2-PMW20-W-0-06		5/19/06		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	28	ND <0.50	ND <0.50	43	2.5	ND <0.50						
OC2-PMW20-W-4-07	1		Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW20-W-0-08		5/19/06	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	17	ND <0.50	ND <0.50	24	1.1	ND <0.50						
OC2-PMW20-W-2-09			Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW20-W-3-10			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50						
OC2-PMW20-W-0-11		5/19/06		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	19	ND <0.50	ND <0.50	31	2.2	ND <0.50						
OC2-PMW20-W-0-12		5/19/06		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	19	ND <0.50	ND <0.50	33	2.7	ND <0.50						
OC2-PMW20-W-4-13			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50								
OC2-PMW20-W-0-14	<u>.l</u> _	5/19/06	Iromary	ND <0.50	ND <0.50	עאן <0.50	ND <0.50	ND <1.0	ND <0.50	19	ND <0.50	ND <0.50	34	2.5	ND <0.50						

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Table 4. Summary of Chemical Analyses for Depth Specification Samples Project Completion Report - Well Installation Groundwater Monitoring Report Omega Chemical Operable Unit 2, Whittier, California

Umega Chen	iicai Oper	able Uni	t 2, Whittier, Califo	rnia																		
Sample ID	Sample Depth (feet bgs)	Sample Date	Sample Description	Lab Order No.	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3- chloropropane	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene
OC2-PMW20-W-4-15		5/22/06	Trip Blank	84562	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW20-W-0-16	 	5/22/06			ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW20-W-1-17	 		Duplicate		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW20-W-0-18		5/22/06	Primary	84562	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW21-W-4-01	·	5/1/06	Trip Blank	84144	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW21-W-2-02			Field Blank	84144	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW21-W-0-03		5/1/06	Primary	84144	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50
OC2-PMW21-W-3-04		5/1/06	Equipment Blank	84144	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW21-W-0-05		5/1/06	Primary	84144	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.1	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW22-W-3-01	Ť T	4/25/06	Equipment Blank	84061	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50
OC2-PMW22-W-4-02			Trip Blank		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW22-W-2-03			Field Blank		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW22-W-0-04		4/25/06	Primary	84061	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.20 J	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW22-W-1-05	II	4/25/06	Duplicate	84061	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	0.24 J	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW22-W-0-06		4/25/06	Primary	84061	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50
OC2-PMW22-W-0-07		4/26/06		84065	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW22-W-4-08	J	4/26/06	Trip Blank	84065	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-3-01		5/16/05	Equipment Blank	76515	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-4-02		5/16/05	Trip Blank	76515	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-03	42	5/16/05	Primary	76515	ND <0.50	ND <0.50	ND <0.50	0.64	2.9	310	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	15	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-4-04	<u> </u>		Trip Blank		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-05	52	5/17/05			ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	44	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	4.3	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-07	62	5/17/05			ND <0.50	ND <0.50	ND <0.50	0.58	2.6	430	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	13 ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50
OC2-PMW23-W-2-08 OC2-PMW23-Bin1-W-01	 	5/17/05	Field Blank	76527	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 0.77	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND < 0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-2-11	 		Field Blank	76540	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-4-12	 		Trip Blank		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-13	82	5/18/05		+	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	39	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-1-14	 		Field Duplicate	+	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	37	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-16	92	5/18/05	Primary		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	3.2	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-21	132	5/19/05	Primary	76580	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.53	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-4-23		5/19/05	Trip Blank	76580	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-4-24	<u> </u>		Trip Blank	76607	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-2-25	 		Field Blank	76607	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-26	142	5/20/05				ND <0.50		ND <0.50			ND <0.50			ND <0.50					ND <0.50	ND <0.50		ND <0.50
OC2-PMW23-W-3-28 OC2-PMW23-W-0-29	150	5/20/05	Equipment Blank			ND <0.50			ND <0.50		ND <0.50			ND <0.50 ND <0.50					ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50
OC2-PMW23-W-4-31	152		Trip Blank					ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50			ND <0.50			ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50
OC2-PMW23-W-0-32	162	5/23/05						ND <0.50	ND <0.50	0.95	ND <0.50	ND <0.50		ND <0.50					ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-2-0-34		5/23/05						ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50				ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-2-0-36	182	5/23/05						ND <0.50	ND <0.50	4.0	ND <0.50	ND <0.50		ND <0.50				ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-2-1-37			Field Duplicate					ND <0.50	ND <0.50	3.9	ND <0.50	ND <0.50		ND <0.50					ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-2-4-38			Trip Blank					ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-4-39			Trip Blank				ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50					ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-40	192	5/24/05			ND <0.50			ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50					ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-3-41			Equipment Blank		ND <0.50	ND <0.50	ND <0.50	ND <0.50			ND <0.50									ND <0.50		ND <0.50
OC2-PMW23-Bin2-Mud-01	<u> </u>	5/24/05	Solid Matrix (• g/Kg)	76671	ND <5.0	ND <5.0	ND <5.0	ND <5.0	ND <5.0	ND <5.0	ND <5.0	ND <5.0	ND <5.0	ND <5.0	ND <5.0	J ND <10	ND <5.0	ND <5.0	_ ND <5.0	_ ND <5.0	ND <5.0	ND <5.0
and the second s																						

N/A Not applicable.

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Notes:

Concentrations in micrograms per liter (µg/L) unless otherwise noted.

ND Not Detected at concentrations above the indicated reporting limit (RL)

J Chemical detected at a concentration greater than the method detection limit (MDL), but less than the RL. Estimated concentration.

Table 4. Summary of Chemical Analyses for Depth Specification Samples
Project Completion Report - Well Installation Groundwater Monitoring Report
Omega Chemical Operable Unit 2, Whittier, California

Cinega Onen	ilcai Opei	uble Oill	t <u>z. wnittier, Califo</u>	IIIIa										_								
Sample ID	Sample Depth (feet bgs)	Sample Date	Sample Description	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chlorotoluene	4-Chlorotoluene	4-Isopropyltoluene	Benzene	Bromobenzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochioromethane
OC2-PMW20-W-4-15		5/22/06	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW20-W-0-16			Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.5	ND <0.50	ND <0.50
OC2-PMW20-W-1-17	T	5/22/06	Duplicate	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.6	ND <0.50	ND <0.50											
OC2-PMW20-W-0-18		5/22/06		ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.1		ND <0.50				
OC2-PMW21-W-4-01			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW21-W-2-02	†		Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW21-W-0-03		5/1/06	Primary	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW21-W-3-04		5/1/06	Equipment Blank	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW21-W-0-05			Primary	ND < 0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.83	2.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.57	ND <0.50	ND <0.50	ND <0.50	2.3
OC2-PMW22-W-3-01			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW22-W-4-02	1	4/25/06	Trip Blank	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50									
OC2-PMW22-W-2-03		4/25/06	Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50											
OC2-PMW22-W-0-04		4/25/06	Primary	ND <0.50	ND <0.50	ND <0.50	1.4	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW22-W-1-05		~	Duplicate	ND <0.50	ND <0.50	ND <0.50	1.4	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW22-W-0-06		4/25/06		ND <0.50	ND <0.50	ND <0.50	0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW22-W-0-07		4/26/06		ND <0.50	1.3	2.5	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.39 J	ND <0.50	ND <0.50	ND <0.50	3.1							
OC2-PMW22-W-4-08			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW23-W-3-01		5/16/05	Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50											
OC2-PMW23-W-4-02			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW23-W-0-03	42	5/16/05		ND <0.50	ND <0.50	ND <0.50	140	ND <0.50	30	ND <0.50	ND <0.50											
OC2-PMW23-W-4-04			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW23-W-0-05 OC2-PMW23-W-0-07	52 62		Primary Primary	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND < 0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	26 140	ND <0.50 ND <0.50	5.8	ND <0.50 ND <0.50	ND <0.50 ND <0.50							
OC2-PMW23-W-2-08	02		Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-Bin1-W-01	 	5/18/05	TICIO DIBIIK	ND <0.50	ND <0.50	ND <0.50	0.78	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW23-W-2-11	1		Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW23-W-4-12	·	5/18/05	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND <0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50
OC2-PMW23-W-0-13	82	5/18/05	Primary	ND <0.50	1.0	ND <0.50	ND <0.50	ND <0.50	18	ND <0.50	3.9	ND <0.50	ND <0.50									
OC2-PMW23-W-1-14		5/18/05	Field Duplicate	ND <0.50	0.94	ND <0.50	ND <0.50	ND <0.50	17	ND <0.50	3.7	ND <0.50	ND <0.50									
OC2-PMW23-W-0-16	92		Primary	ND <0.50	ND <0.50	ND <0.50	0.60	ND <0.50	3.2	ND <0.50	ND <0.50											
OC2-PMW23-W-0-21	132		Primary	ND <0.50	ND <0.50	ND <0.50	0.76	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW23-W-4-23 OC2-PMW23-W-4-24		5/19/05		ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50							
OC2-PMW23-W-2-25	1		Trip Blank Field Blank	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50 ND <0.50											
OC2-PMW23-W-0-26	142	5/20/05		ND <0.50				ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50				
OC2-PMW23-W-3-28	† 		Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50				
OC2-PMW23-W-0-29	152	5/20/05	!	ND <0.50		ND <0.50	ND <0.50	1.3	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50					
OC2-PMW23-W-4-31		5/23/05	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50											
OC2-PMW23-W-0-32	162	5/23/05		ND <0.50	ND <0.50		ND <0.50		ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.0	ND <0.50	ND <0.50	0.80	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-2-0-34	172	5/23/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50			ND <0.50	2.3	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	0.69
OC2-PMW23-2-0-36	182	5/23/05		ND <0.50	·	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.6	ND <0.50	ND <0.50						
OC2-PMW23-2-1-37 OC2-PMW23-2-4-38	182		Field Duplicate Trip Blank	ND <0.50	ND < 0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	1.6	ND <0.50 ND <0.50	ND <0.50 ND <0.50				
OC2-PMW23-W-4-39	 		Trip Blank	ND <0.50 ND <0.50		ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50 ND <0.50	ND <0.50	ND <0.50						
OC2-PMW23-W-0-40	192	5/24/05		0.79	ND <0.50	ND <0.50	ND <0.50	ND <0.50				ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50
OC2-PMW23-W-3-41	 -		Equipment Blank	ND <0.50	ND <0.50	ND <0.50		ND <0.50				ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50			ND <0.50
OC2-PMW23-Bin2-Mud-01			Solid Matrix (µg/Kg)		ND <5.0		ND <5.0			ND <5.0	ND <5.0	ND <5.0	ND <5.0			ND <5.0						

Notes:

Concentrations in micrograms per liter ($\mu g/L$) unless otherwise noted.

ND Not Detected at concentrations above the indicated reporting limit (RL)

J Chemical detected at a concentration greater than the method detection

limit (MDL), but less than the RL. Estimated concentration.

N/A Not applicable.

G:\APROJECT\Omega Chemical\Reports\PCR-WIGWM\Table 4 - Summary of Analytical Results.xls

Table 4. Summary of Chemical Analyses for Depth Specification Samples Project Completion Report - Well Installation Groundwater Monitoring Report Omega Chemical Operable Unit 2, Whittier, California

Onlega Chem	icai Oper	able Uni	<u>t 2, Whittier, Califo</u>	rnia																	
Sample ID	Sample Depth (feet bgs)	Sample Date	Sample Description	Dibromomethane	Dichlorodifluoromethane (Freon 113)	Ethylbenzene	Isopropyibenzene	Xylenes	Methylene Chloride	n-Buty/benzene	n-Propylbenzene	Naphthalene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethene	Trichloroethylene	Trichlorofluoromethane (Freon 11)	Vinyl Chloride
ŌĈ2-PMW20-W-4-15		5/22/06	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW20-W-0-16		5/22/06		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	8.3	ND <0.50	ND <0.50
OC2-PMW20-W-1-17			Duplicate	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	8.4	ND <0.50	ND <0.50
OC2-PMW20-W-0-18		5/22/06		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50
OC2-PMW21-W-4-01			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW21-W-2-02			Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW21-W-0-03			Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.8	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW21-W-3-04			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW21-W-0-05		5/1/06		ND <0.50	ND <0.50	1.6	ND <0.50	8.8	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	1.7	2.1	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW22-W-3-01			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	0.23 J	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW22-W-4-02	 		Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	0.24 J	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW22-W-2-03			Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW22-W-0-04	ļ				ND <0.50	ND <0.50	ND <0.50			ND <0.50	<u> </u>	10		ND <0.50	ND <0.50		ND <0.50	ND <0.50		ND <0.50	ND <0.50
	ļ	4/25/06		ND <0.50				ND <1.0	ND <0.50		ND <0.50		ND <0.50	ND <0.50		1.4	ND <0.50		ND <0.50		
OC2-PMW22-W-1-05	ł		Duplicate	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	12	ND <0.50		ND <0.50	1.3		ND <0.50	·	ND <0.50	ND <0.50
OC2-PMW22-W-0-06		4/25/06		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	7.0	ND <0.50	ND <0.50	ND <0.50	2.6	ND <0.50	ND <0.50	0.28 J	ND <0.50	ND <0.50
OC2-PMW22-W-0-07	l	4/26/06		ND <0.50	ND <0.50	0.30 J	ND <0.50	1.48 J	ND <0.50	ND <0.50	ND <0.50	0.77	ND <0.50	ND <0.50	ND <0.50	0.37 J	0.49 J	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW22-W-4-08		4/26/06	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	0.28 J	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-3-01			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-4-02	·		Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-03	42	5/16/05		ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	600	1.5	1.8	520	57	ND <0.50
OC2-PMW23-W-4-04	i=		Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-05	52	5/17/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	63	ND <0.50	ND <0.50	79	12	ND <0.50
OC2-PMW23-W-0-07		5/17/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	660	ND <0.50	1.2	580	110	ND <0.50
OC2-PMW23-W-2-08	- UZ		Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-Bin1-W-01	 	5/18/05	1 ICIU DIAIK	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	1.8	ND <0.50	ND <0.50	2.6	ND <0.50	ND <0.50
OC2-PMW23-W-2-11	·		Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-4-12	1		Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-13										·				~ 							
	82	5/18/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	69	ND <0.50	ND <0.50	100	9.2	ND <0.50
OC2-PMW23-W-1-14			Field Duplicate	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	66	ND <0.50	ND <0.50	98	8.7	ND <0.50
OC2-PMW23-W-0-16		5/18/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	36	ND <0.50	ND <0.50	31	ND <0.50	ND <0.50
OC2-PMW23-W-0-21	132	5/19/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	3.1	ND <0.50	ND <0.50	80	ND <0.50	ND <0.50
OC2-PMW23-W-4-23	 		Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-4-24		5/20/05	Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-2-25			Field Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-26	142	5/20/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50			ND <0.50	ND <0.50	0.61	ND <0.50	1.6	ND <0.50	ND <0.50
OC2-PMW23-W-3-28			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50			ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-29		5/20/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-4-31			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-32		5/23/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	5.8	ND <0.50	ND <0.50	120	1.4	ND <0.50
OC2-PMW23-2-0-34		5/23/05		ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50
OC2-PMW23-2-0-36	182	5/23/05	Primary	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	27	ND <0.50	ND <0.50	75	11	ND <0.50
OC2-PMW23-2-1-37	182	5/23/05	Field Duplicate	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	27	ND <0.50	ND <0.50	74	11	ND <0.50
OC2-PMW23-2-4-38			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50
OC2-PMW23-W-4-39			Trip Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND < 0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50
OC2-PMW23-W-0-40		5/24/05		ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	0.57	ND <0.50	ND <0.50	1.0		ND <0.50
OC2-PMW23-W-3-41			Equipment Blank	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <1.0	ND <0.50	ND <0.50	ND <0.50	ND < 0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50	ND <0.50		ND <0.50
OC2-PMW23-Bin2-Mud-01			Solid Matrix (µg/Kg)		ND <5.0		ND <5.0	ND <5.0	ND <5.0	ND <5.0		ND <5.0	ND <5.0	ND <5.0		ND <5.0	ND <5.0	ND <5.0		ND <5.0	ND <5.0
Notes:			1-3-13/																	· · · · · · · · · · · · · · · · · · ·	

Concentrations in micrograms per liter (µg/L) unless otherwise noted.

ND Not Detected at concentrations above the indicated reporting limit (RL)

J Chemical detected at a concentration greater than the method detection limit (MDL), but less than the RL. Estimated concentration.

N/A Not applicable.

Table 5. Sample ID and Tracking Log - Baseline Groundwater Sampling
Project Completion Report - Well Installation and Groundwater Monitoring
Omega Chemical Operable Unit 2, Whittier, California

Sample ID	Date Collected	Date Received	Lab Order No.	VOCs	тос	1,2,3-TCP	SVOCs	NDMA	1,4 Dioxane	Cr+6	Perchlorate	Total Dissolved TAL Metals	Anions	TDS	TKN	Total Cyanide	Extraction Date	Holding Time (Days)	Was Holding Time Met (Y/N)	Surrogate Recovery OK?
OC2-PMW12-0-1	7/6/2006	7/6/2006	06G019	Х	X	х	Х	Х	×	х	х	x	х	Х	х	×	7/11/2006	5	Υ	
OC2-PMW13B-0-2	7/6/2006	7/6/2006	06G019	X	X	х	X	х	x	x	х	х	х	Х	х	x	7/11/2006	5	Y	
OC2-PMW13B-1-3	7/6/2006	7/6/2006	06G019	Х	×	x	X	х	х	х	х	х	×	×	х	×	7/11/2006	5	Υ	
OC2-PMW14-0-12	7/7/2006	7/7/2006	06G027	X	×	×	x	х	x	x	x	х	×	X	х	x			1	
OC2-PMW15-0-17	7/10/2006	7/10/2006	06G039	Х	х	x	x	х	×	Х	х	x	×	х	х	×	7/14/2006	4	Υ	Y
OC2-PMW15-1-20	7/10/2006	7/10/2006	06G039	Х	x	x	х	х	×	Х	х	x	x	х	х	х	7/13/2006	3	Y	Υ
OC2-PMW15-5-21	7/10/2006	7/10/2006	06G039	Х	х	х	х	х	×		x	x	×	×	×	×	7/13/2006	3	Y	Y
OC2-PMW16A-0-25	7/11/2006	7/11/2006	06G048	Х	X	x	×	x	×	x	x	X	×	x	×	х				
OC2-PMW16B-0-26	7/11/2006	7/11/2006	06G048	X	X	x	×	Х	×	X	x	×	x	x	X	X	 			
OC2-PMW16C-0-27	7/11/2006	7/11/2006	06G048	х	×	×	х	Х	×	X	×	x	×	x	x	×				1
OC2-PMW17A-0-37	7/11/2006											†····			† <u> </u>			<u> </u>		
OC2-PMW17A-0-38	7/13/2006	7/13/2006	06G073		<u> </u>		X		x			х			X	×				
OC2-PMW18A-0-22	7/10/2006	7/10/2006	06G039	χ	×	×	X	х х	×	X	x	x	x	x	X	×	7/14/2006	4	Y	Y
OC2-PMW18B-0-23	7/10/2006	7/10/2006	06G039	X	X	x	x	X	x	x	x	x	x	×	X	X	7/14/2006	4	Ÿ	Y
OC2-PMW18C-0-24	7/10/2006	7/10/2006	06G039	x	×	x	X	x	$\frac{x}{x}$	x	x	x	X	\ x	X	X	7/15/2006	5	Ÿ	Y
0C2-PMW19-0-34	7/12/2006								 		 	- ^ -	 	 	 	<u> </u>	17.10/2000			 "
OC2-PMW19-0-37	7/13/2006	7/13/2006	06G073				X		x	·—·		x	†		X	×	-			+
OC2-PMW20A-0-30	7/11/2006	7/11/2006	06G048	X		×	x	x	$\frac{1}{x}$	X	x	x	×	l x	X	X				+
OC2-PMW20B-0-31	7/11/2006	7/11/2006	06G048	X	<u> </u>	x	X	X	x	<u>`</u>	x	x	X	$\frac{\hat{x}}{x}$	1 x	×	 			+
OC2-PMW20C-0-32	7/11/2006	7/11/2006	06G048	Х Х	x	x		X	×	X	x	x	X	×	X	×			 	
OC2-PMW21-0-40	7/12/2006											<u> </u>		<u> </u>					· · · · · · · · · · · · · · · · · · ·	1
OC2-PMW22-0-33	7/11/2006	7/11/2006	06G048	x	×	x	х	X	x	X	х		х	х	×	×	-		······································	1
OC2-PMW23B-0-13	7/7/2006	7/7/2006	06G027	X	- x	X	X	X	x x	x	x	x	- - x	X	X	×				
OC2-PMW23C-0-14	7/7/2006	7/7/2006	06G027	X X	$\frac{\hat{x}}{x}$	x	x	X	x	X	x		x	x	X	×	 			+
OC2-PMW23C-1-15	7/7/2006	7/7/2006	06G027	X	<u>x</u>	x		X	x	×	x x	x	X	$\frac{\hat{x}}{x}$	X	×	<u> </u>			+
OC2-PMW23D-0-16	7/7/2006	7/7/2006	06G027	X	$\frac{\hat{x}}{x}$	- X	X	х	x	X	X	x	x	X	X	×				
TB-01-06-06	7/7/2006	7/7/2006	06G027	X					 			 	- 		†		 			+
TB-06-06-06	7/7/2006	7/7/2006	06G027	X							 		-		t				·····	+
OC2-00-W-4-5	7/6/2006	7/6/2006	06G019	X					 					-	 		7/11/2006	5	Y	
OC2-00-W-2-7	7/6/2006	7/6/2006	06G019	×		_			 		<u> </u>		† ····		 		7/11/2006	5	Ý	
OC2-00-W-4-8	7/6/2006	7/6/2006	06G019	X					 					<u> </u>	1		7/11/2006	5	Ÿ	
OC2-00-W-2-9	7/7/2006	7/7/2006	06G027	x		<u> </u>			 				†	 	 		171112000	<u>-</u> -	<u> </u>	+
OC2-00-W-4-10	7/7/2006	7/7/2006	06G027	<u>x</u>	 	1 -			 						├		 		1	+
OC2-00-W-4-11	7/7/2006	7/7/2006	06G027	×	 				 		·	 	 	 	 		 			+
OC2-00-W-4-18	7/10/2006	7/10/2006	06G039	x	l						 	 			 	·	7/14/2006	4	Y Y	Y Y
OC2-00-W-1-19	7/10/2006	7/10/2006	06G039	×	 	 	-		 		-	 	 		}	 	7/13/2006	3	 	
OC2-00-W-2-28	7/11/2006	7/11/2006	06G048	x	-	 			 				 		 		7710/2000	 	'	+'-
OC2-00-W-4-29	7/11/2006	7/11/2006	06G048	×	 	 			├──						 	 	 			+

Notes:

Samples for Total Dissolved Metals were filtered and preserved by the lab upon receipts.

Table 6. Baseline Groundwater Sampling - June 2006: Volatile Organic Compounds (VOCs) Project Completion Report - Well Installation and Groundwater Monitoring
Omega Chemical Operable Unit 2, Whittier, California

Onlega Chemi	icai Operabie	Onit 2, Whit	tier, Californ	18 T											+ 2 ·						,
Sample ID	Date Collected	1,1,1-TCA	1,1,2-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCP	Benzene	Chloroform	c-1,2-DCE	t-1,2-DCE	Dibromochloro- methane	Dichiroro- Difluoromethane	PCE	Toluene	TCE	Trichloro- fluoromethane	FC-113	MTBE	Acetone	Bromoform
OC2-PMW12-0-1	7/6/06	<0.2	<0.2	<0.2	8.1	<0.2	<0.2	<0.2	0.27 J	<0.2	<0.2	0.53 J	<0.3	17	0.22 J	91 E	<0.2	<0.2	<0.2	<5	0.72
OC2-PMW12-0-1DL	7/6/06	<1	<1	<1	8.4	<1	<0.2	 <1	<1	<1	<1	<1	<1.5	16	<1	91	<1	<1	<1	<25	<1.5
OC2-PMW13B-0-2	7/6/06	<0.2	<0.2	<0.2	<0.2	0.67	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	2.5	<0.2	0.26 J	<0.2	<0.2	0.6 J	<5	<0.3
OC2-PMW13B-1-3	7/6/06	<0.2	<0.2	<0.2	<0.2	0.59	<0.2	<0.2	<0.2	<0.2	<0.2	0.87 J	<0.3	2.4	<0.2	0.24 J	<0.2	<0.2	0.55 J	<5	2.1
OC2-PMW14-0-12	7/7/06	<0.2	<0.2	0.48 J	170 E	1.6	<0.2	<0.2	16	0.77	0.29 J	<0.2	0.5 J l	230 E	<0.2	36	110 E	270 E	0.6 J	<5	<0.3
OC2-PMW14-0-12DL	7/7/06	<2	<2	<2	180	<2	<0.2	<2	18	<2	<2	<2	<3	230	<2	37	110	280	<2	<50	<3
OC2-PMW15-0-17	7/10/06	1.1	0.6	3.2	170 E	12	<0.2	0.34 J	210 E	3.8	1.4	<0.2	2.2	200 E	<0.2	260 E	140 E	450 E	3.1	<5	<0.3
OC2-PMW15-0-17DL	7/10/06	<20	<20	<20	1200	<20	<0.2	<20	230	<20	<20	<20	<20	1300	<20	290	540	1400	<20	<500	<30
OC2-PMW15-1-20	7/10/06	1.1	0.68	3.4	180 E	11	<0.2	0.34 J	210 E	3.8	1.5	<0.2	2.4	190 E	<0.2	260 E	140 E	360 E	3.2	<5	<0.3
OC2-PMW15-1-20DL	7/10/06	<20	<20	<20	1200	<20	<0.2	<20	230	<20	<20	<20	<20	1400	<20	290	570	1500	<20	<500	<30
OC2-PMW15-5-21	7/10/06	1	0.67	3.1	130 E	11	<0.2	0.34 J	210 E	3.7	1.4	<0.2	2.3	260 E	<0.2	260 E	110 E	320 E	2.9	<5	<0.3
OC2-PMW15-5-21DL	7/10/06	<20	<20	<20	1200	<20	<0.2	<20	240	<20	<20	<20	<20	1400	<20	300	550	1400	<20	<500	<30
OC2-PMW16A-0-25	7/10/06	<0.2	<0.2	1	2.5	<0.2	<0.2	1.1	6.6	4.2	<0.2	0.35 J	<0.3	3.5	<0.2	1.7	<0.2	0.33 J	<0.2	<5	<0.3
OC2-PMW16B-0-26	7/11/06	<0.2 <0.2	<0.2	<0.2	0.35 J	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2 <0.2	<0.2	<0.3	3.3	<0.2	7.8	0.88 J	1.8	<0.2	<5	<0.3
OC2-PMW16C-0-27						—								_		_		<0.2	<0.2	<5 <5	<0.3
II	7/11/06	<0.2	<0.2	<0.2	0.33 J	<0.2	<0.2	<0.2	0.8 J	0.42 J	<0.2	<0.2	<0.3	0.25 J	<0.2	1.5	<0.2			_	
OC2-PMW17A-0-38	7/13/06			460 5	400 5	42					4.0					460 5		8	-0.2	 <5	 <0.3
OC2-PMW17A-0-37	7/11/06	62	0.7	160 E	180 E	13	<0.2	<0.2	1.9	300 E	1.8	<0.2	<0.2	540 E	<0.2	160 E	5.6		<0.2	<120	<7.5
OC2-PMW17A-0-37DL	7/11/06	60	<5	170	370	13	<5	<5	<5	290	<5	<5	<7.5	450	<5	150	9.7 J	9.3 J	<5 -0.0		
OC2-PMW17B-0-38	7/12/06	0.94	<0.2	1.4	39	0.41 J	<0.2	<0.2	1.3	6.5	<0.2	<0.2	<0.3	130 E	<0.2	160 E	33	70 E	<0.2	6.1 J	<0.3
OC2-PMW17B-0-38DL	7/12/06	<1	<1	1.4 J	39	<1	<1	<1	1.5 J	6.6	<1	<1	<1.5	130	<1	150	34	69	<1	<25	<1.5
0C2-PMW17C-0-39	7/12/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.27 J	<0.2	<0.2	<0.2	<0.3	_ 1	<0.2	14	<0.2	<0.2	<0.2	<5	<0.3
OC2-PMW18A-0-22	7/10/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	5.6	<0.2	0.84	<0.2	<0.2	<0.2	11	<0.3
OC2-PMW18B-0-23	7/10/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	0.76	<0.2	0.75	<0.2	0.27 J	<0.2	5.4 J	<0.3
OC2-PMW18C-0-24	7/10/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.3
0C2-PMW19-0-34	7/12/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	0.3 J	<0.2	<0.2	<0.2	<5	<0.3
OC2-PMW19-0-37	7/13/06			_	_	_															
OC2-PMW20A-0-30	7/11/06	<0.2	<0.2	2.3	11	0.43 J	0.72	<0.2	0.67 J	1.3	<0.2	<0.2	<0.3	31	<0.2	44	4.2	8.6	<0.2	<5	<0.3
OC2-PMW20B-0-31	7/11/06	<0.2	<0.2	1.5	5.9	1.2	0.32 J	<0.2	0.63 J	0.66	<0.2	<0.2	<0.3	18	<0.2	26	1.5	3.2	<0.2	<5	<0.3
OC2-PMW20C-0-32	7/11/06	<0.2	<0.2	<0.2	0.52	<0.2	<0.2	<0.2	<0.2	4.4	<0.2	<0.2	<0.3	<0.2	<0.2	2.2	<0.2	<0.2	<0.2	<5	<0.3
C2-PMW21-0-40	7/12/06	0.95	<0.2	<0.2	0.59	<0.2	<0.2	<0.2	0.34 J	<0.2	<0.2	<0.2	<0.3	2.2	<0.2	0.29 J	<0.2	<0.2	<0.2	<5	<0.3
2-PMW22-0-33	7/11/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.87 J	<0.2	<0.2	<0.2	<0.3	3.2	<0.2	1.2	<0.2	<0.2	<0.2	<5	<0.3
2-PMW23B-0-13	7/7/06	<0.2	<0.2	<0.2	1.2	<0.2	<0.2	<0.2	0.42 J	1.2	<0.2	<0.2	<0.3	21	<0.2	16	<0.2	0.31 J	<0.2	<5	<0.3
OC2-PMW23C-0-14	7/7/06	0.47 J	0.52	2.1	190 E	9.3	<0.2	0.24 J	110 E	16	1.5	<0.2	0.65 J	260 E	<0.2	420 E	180 E	500 E	1.4	<5	<0.3
OC2-PMW23C-0-14DL	7/7/06	<10	<10	<10	420	<10	<0.2	<10	120	17 J	<10	<10	<15	580	<10	420	190	510	<10	<250	<15
OC2-PMW23C-1-15	7/7/06	0.47 J	0.48 J	2.1	160 E	9.3	<0.2	0.24 J	110 E	16	1.4	<0.2	0.69 J	330 E	<0.2	410 E	180 E	500 E	1.2	<5	<0.3
OC2-PMW23C-1-15DL	7/7/06	<10	<10	<10	420	<10	<0.2	<10	120	17 J	<10	<10	<15	580	<10	410	190	520	<10	<250	<15
OC2-PMW23D-0-16	7/7/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	0.27 J	<0.2	<0.2	<0.2	<5	<0.3
TB-01-06-06	7/7/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.3
TB-06-06-06	7/7/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.3
OC2-00-W-1-19	7/10/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.31 J	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	 <5	<0.3
OC2-00-W-2-28	7/11/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.34 J	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.3
OC2-00-W-2-7	7/6/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.32 J	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.3
OC2-00-W-2-9	7/7/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.31 J	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.3
OC2-00-VV-2-9 OC2-00-W-4-10	7/7/06	<0.2 <0.2	<0.2 <0.2	<0.2 <0.2	<0.2	<0.2 <0.2	<0.2 <0.2	<0.2	<0.2	<0.2 <0.2	<0.2 <0.2	<0.2	<0.3	<0.2	<0.2	<0.2 <0.2	<0.2	<0.2 <0.2	<0.2 <0.2	<5	<0.3
OC2-00-W-4-10	7/7/06	<0.2 <0.2	<0.2 <0.2	<0.2 <0.2	<0.2	<0.2 <0.2	<0.2 <0.2	<0.2	<0.2	<0.2	<0.2 <0.2	<0.2	<0.3	<0.2 <0.2	<0.2	<0.2 <0.2	<0.2	<0.2	<0.2	<5	<0.3
OC2-00-VV-4-11	7/10/06	<0.2 <0.2	<0.2 <0.2	<0.2 <0.2	<0.2 <0.2	<0.2 <0.2	<0.2 <0.2	<0.2	<0.2	<0.2 <0.2	<0.2 <0.2	<0.2	<0.3	<0.2	<0.2	<0.2 <0.2	<0.2	<0.2 <0.2	<0.2	<5	<0.3
OC2-00-VV-4-18	7/10/06											<0.2 <0.2	<0.3	<0.2 <0.2	<0.2 <0.2	<0.2 <0.2	0.26 J	<0.2 <0.2	<0.2 <0.2	\5 <5	<0.3
· · · - ·		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2			<0.2				<0.2 <0.2		\S	
OC2-00-W-4-5	7/6/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3		<0.2	<0.2	<0.2		<0.2		<0.3
OC2-00-W-4-8	7/6/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<0.3
OC2-00-W-2-35	7/12/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.34 J	<0.2	<0.2	<0.2	<0.2	<0.2 <0.2	<0.2 <0.2	<0.5	<0.2 <0.2	<0.2 <0.2	<0.2	<5 <5	<0.3
OC2-00-W-4-36	7/12/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<1	<u> </u>		<0.2			<0.2	<u> </u>	<0.3

Concentrations in micrograms per liter (ug/L)

DL Diluted sample, presents a more accurate concentration of those analytes with E-flag in primary sample.

Concentration above detection limit but below reporting limit - estimated concentration.

Concentration exceeds highest concentration in calibration curve - estimated concentration.

Table 7. Baseline Groundwater Sampling - June 2006: Semi-Volatile Organic Compounds (SVOCs)
Project Completion Report - Well Installation and Groundwater Monitoring
Omega Chemical Operable Unit 2. Whittier. California

	The second	ie Offit 2, Willtier,	· _				T
Sample ID	Date	SVOCs	Benzo(A) Pyrene	Bis(2-Ethylhexyl) Phthalate	Hexachloro- Benzene	Pentachloro Phenol	Total Organic Carbon*
00	Collected	Method 8270C	8270C SIM	8270C SIM	8270C SIM	8270C SIM	415.1
OC2-PMW12-0-1	7/6/2006	ND	<0.094	1.7 J	<0.47	<0.47	1.44 J
OC2-PMW13B-0-2	7/6/2006	ND	<0.094	<0.94	<0.47	<0.47	0.686 J
OC2-PMW13B-1-3	7/6/2006	ND	<0.094	1.5 J	<0.47	<0.47	0.65 J
OC2-PMW14-0-12	7/7/2006	ND	<0.094	1,4 J	<0.47	<0.47	1.16 J
OC2-PMW15-0-17	7/10/2006	· ND	<0.094	<0.94	<0.47	<0.47	0.95 J
OC2-PMW15-1-20	7/10/2006	ND	<0.094	3.6	<0.47	<0.47	0.909 J
OC2-PMW15-5-21	7/10/2006	ND	<0.094	1.2 J	<0.47	<0.47	1.01 J
OC2-PMW16A-0-25	7/11/2006	ND	<0.094	1.6 J	<0.47	< 0.47	1.65 J
OC2-PMW16B-0-26	7/11/2006	ND	<0.094	4.2	<0.47	<0.47	0.526 J
OC2-PMW16C-0-27	7/11/2006	ND	<0.094	1.1 J	<0.47	<0.47	0.74 J
OC2-PMW17A-0-38	7/13/2006	ND	<0.094	3.3	<0.47	< 0.47	
OC2-PMW17A-0-37	7/11/2006						32
OC2-PMW17B-0-38	7/12/2006	ND	<0.094	1.4 J	<0.47	<0.47	0.733 J
0C2-PMW17C-0-39	7/12/2006	ND	<0.094	<0.94	<0.47	<0.47	0.596 J
OC2-PMW18A-0-22	7/10/2006	ND	< 0.094	2 U	<0.47	<0.47	2.6
OC2-PMW18B-0-23	7/10/2006	ND	<0.094	2.1 U	<0.47	<0.47	0.974 J
OC2-PMW18C-0-24	7/10/2006	ND	<0.094	2.6	<0.47	<0.47	<0.5
0C2-PMW19-0-34	7/12/2006		-				2.72
OC2-PMW19-0-37	7/13/2006	ND	<0.094	4.2	<0.47	<0.47	
OC2-PMW20A-0-30	7/11/2006	ND	<0.094	<0.94	<0.47	<0.47	0.613 J
OC2-PMW20B-0-31	7/11/2006	ND	<0.094	1.9 J	<0.47	<0.47	0.649 J
OC2-PMW20C-0-32	7/11/2006	ND	<0.094	1.4 J	<0.47	<0.47	0.592 J
OC2-PMW21-0-40	7/12/2006	ND	<0.094	2	<0.47	<0.47	0.769 J
OC2-PMW22-0-33	7/11/2006	ND	<0.094	1.1 J	<0.47	<0.47	0.599 J
OC2-PMW23B-0-13	7/7/2006	ND	<0.094	2	<0.47	<0.47	1.52 J
OC2-PMW23C-0-14	7/7/2006	ND	<0.094	1.6 J	<0.47	<0.47	1.67 J
OC2-PMW23C-1-15	7/7/2006	ND	<0.094	<0.94	<0.47	<0.47	1.53 J
OC2-PMW23D-0-16	7/7/2006	ND	<0.094	<0.94	<0.47	<0.47	0.64 J

Notes:

Concentrations in micrograms per liter (ug/L)

^{*} Concentrations in milligrams per liter (mg/L)

U Indicates analyte tested for but not detected, or determined by QC review to be not detected.

J Indicates analyte was detected above the method detection limit but below the reported limit. Estimated value.

Table 8. Baseline Groundwater Sampling - June 2006: 1,2,3-Trichloropropane, N-nitrosodimethylamine, Hexavalent Chromium, Perchlorate and 1,4-Dioxane Project Completion Report - Well Installation and Groundwater Monitoring

Omega Chemical Operable Unit 2, Whittier, California

Sample ID	Date Collected	1,2,3-Trichloropropane 8260 SIM	N-nitrosodimethylamine 1625 Mod	Hexavalent Chromium 218.6	Perchlorate 314.0	1,4-Dioxane 8270 SIM
OC2-PMW12-0-1	7/6/06	<0.0025	0.00326	1.29	1.11 J	<0.94
OC2-PMW13B-0-2	7/6/06	<0.0025	<0.0020	3.6	2.72 J	< 0.94
OC2-PMW13B-1-3	7/6/06	<0.0025	<0.0020	3.6	3.42 J	< 0.94
OC2-PMW14-0-12	7/7/06	<0.0025	<0.0020	3.27	2.24 J	6.6
OC2-PMW15-0-17	7/10/06	<0.0025	0.00421	15.3	4.19 J	39
OC2-PMW15-1-20	7/10/06	<0.0025	0.00404	14.7	3.95 J	58
OC2-PMW15-5-21	7/10/06	<0.0025	0.00313	14.8	3.96 J	46
OC2-PMW16A-0-25	7/11/06	<0.0025	<0.0020	5.84	6.62	0.96 J
OC2-PMW16B-0-26	7/11/06	<0.0025	<0.0020	5.2	3.13 J	< 0.94
OC2-PMW16C-0-27	7/11/06	<0.0025	<0.0020	1.65	2.26 J	<0.94
OC2-PMW17A-0-38	7/13/06					65
OC2-PMW17A-0-37	7/11/06	<0.0025	0.00668	<0.2	8.19	
OC2-PMW17B-0-38	7/12/06	<0.0025	<0.0002	17.5	4.31 J	2.2
0C2-PMW17C-0-39	7/12/06	<0.0025	<0.0002	3.91	1.79 J	< 0.94
OC2-PMW18A-0-22	7/10/06	<0.0025	<0.0020	6.49	6.55	< 0.94
OC2-PMW18B-0-23	7/10/06	<0.0025	<0.0020	7.08	6.21	< 0.94
OC2-PMW18C-0-24	7/10/06	<0.0025	<0.0020	1.03	2.72 J	<0.94
0C2-PMW19-0-34	7/12/06	<0.0025	<0.0002	<0.2	1.28 J	
OC2-PMW19-0-37	7/13/06					< 0.94
OC2-PMW20A-0-30	7/11/06	<0.0025	<0.0020	13.9	3.76 J	3.6
OC2-PMW20B-0-31	7/11/06	<0.0025	<0.0020	17.2	4.59 J	4.1
OC2-PMW20C-0-32	7/11/06	<0.0025	<0.0020	<0.1	<0.5	< 0.94
OC2-PMW21-0-40	7/12/06	<0.0025	<0.0002	2.74	3.77 J	2.4
OC2-PMW22-0-33	7/11/06	<0.0025	<0.0020	2.93	3.51 J	2.1
OC2-PMW23B-0-13	7/7/06	<0.0025	<0.0020	15	4.05 J	< 0.94
OC2-PMW23C-0-14	7/7/06	<0.0025	0.00451	1.93	3.56 J	31
OC2-PMW23C-1-15	7/7/06	<0.0025	0.00429	1.91	3.55 J	36
OC2-PMW23D-0-16	7/7/06	<0.0025	<0.0020	4.95	4.18 J	<0.94

Notes:

Concentrations in micrograms per liter (ug/L)

<#### Indicates less than indicated method detection limit

J Indicates analyte was detected above the method detection limit but below the reported limit.

--- Indicates the sample was not analyzed.



Table 9. Baseline Groundwater Sampling - June 2006: Dissolved TAL Metals
Project Completion Report - Well Installation and Groundwater Monitoring
Omega Chemical Operable Unit 2, Whittier, California

0C2-PMW18A-0-22 7/10/06 <200 0.304 J 2.37 49.8 <0.25 81.8 <0.5 100000 4.05 0.42 J 0.939 <200 <0.5 21300 <0.5 21300 <0.5 4.33 0.578 4040 20.7 <0.5 46200 <0.5 514 13.4 <0.1 20.0 <0.0000000 <0.00000000000000000000	- United City	emicai Opera	I Ollitz,	Trintaor, Oc	annorma.		T				T								-						T			$\overline{}$
Septembly Collection Coll																İ												· II
DCZ-PMYHIS-13						_	1_				ļ.,		_			l								 	l l		1 - 1	
022PMW16-02 78/00		Collected	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium		Chromium				Lead		Manganese	Molybdenum	Nickel					Thallium		Zinc		<u> </u>
022=PMW159-13 7806 < <00	OC2-PMW12-0-1	7/6/06	<200	0.282 J	2.9	28.1	<0.25	538	<0.5	129,000	1.15		3.38					115	6.8	5,790				+	 		<0.1	
022-PMW156-17 771006 < <00 <0.025		7/6/06	<200	<0.25	1.08	25.8	<0.25	443	<0.5		3.39		2.84				 	41.4	3.06			<0.5		+				
022 PMW15-017 770006 <000 <005	OC2-PMW13B-1-3	7/6/06	<200	<0.25	1.09	24.4	<0.25	437	<0.5	130,000	3.3	<0.25	1.93	<200	<0.5		 	41.1	0.784	2,640	7.59	<0.5	126,000	<0.5	 		<0.1	
DCZ-PMW15-20 71106 - 200 - 0.26	OC2-PMW14-0-12	7/7/06	<200	<0.25	1.28	47.2	<0.25	395	<0.5	169,000	3.22	0.528	0.974	<200	<0.5			12	1.05	3,050	5.02	<0.5	106,000	<0.5	5.29	5.22 J	<0.1	50.0
0C2-PMW16-0-27 7/11/06	OC2-PMW15-0-17	7/10/06	<200	<0.25	1.89	50.7	<0.25	331	<0.5_	194,000	12	0.43 J	1.58	<200	<0.5	52,700	0.604 J	2.43	0.356 J	4,250	4.53	<0.5	93,200	<0.5	4.78	5.03 J	<0.1	42.0
0C2-PMW180-026 71106 <00	OC2-PMW15-1-20	7/10/06	<200	<0.25	1.82	51.6	<0.25	329	<0.5	192,000	11.9	0.446 J	1.14	<200	<0.5	53,000	<0.5	2.33	0.829	4,200	4.35	<0.5	92,700	<0.5	4.73	8.84 J	<0.1	40.4
0C2-PMW18B-0-26 7/11/08 <200 <0.25	OC2-PMW15-5-21	7/10/06	<200	<0.25	1.85	49.8	<0.25	331	<0.5	194,000	12	0.459 J	1.14	<200	<0.5	53,400	0.579 J	2.38	0.313 J	4,240	4.39	<0.5	94,000	<0.5	4.75	7.83 J	<0.1	43.2
OCZ-PMW16C-027 7/11/08 < 200 <0.26	OC2-PMW16A-0-25	7/11/06	<200	0.253 J	1.24	68.9	<0.25	584	<0.5	511,000	6.33	2.34 _	1.76	<200	<0.5	115,000	5.58	1.61 J	2.57	8,170	14.1	< <u>0</u> .5	276,000	<0.5	2.12	13.5	<0.1	24.2
OCZ-PMW17A-0-37 7/1106	OC2-PMW16B-0-26	7/11/06	<200	<0.25	1.22	25.6	<0.25	231	<0.5	188,000	5.63	0.458 J	2.13	<200	<0.5	53,300	0.546 J	3.04	<0.25	5,190	41.5	<0.5	104,000	<u><0.5</u>	4.47	9.63 J	<0.1	22.9
OCZ-PMW178-0-38 7/13/06 <200 0.577 4.01 99.5 <0.25 378 <0.5 142,000 4.2 3 6.7 <200 <0.5 41,400 2.190 12.9 5.99 6.410 6.16 <0.5 194,000 <0.5 5.07 35.5 <0.1 25.5 CCZ-PMW178-0-38 7/12/06 <200 <0.25 1.18 32.6 <0.25 285 <0.5 166000 17.3 0.854 1.93 <200 <200 47300 0.691 J 2.2 1.51 5140 25 <0.5 95300 <0.5 46.40 22 <0.1 27.1 20.0 CZ-PMW178-0-32 7/10/06 <200 0.304 J 2.37 4.98 <0.25 318 <0.5 318 <0.5 18.0 0.0 4.05 0.42 J 0.393 <0.0 <0.5 1300 <0.5 1300 <0.5 1300 <0.5 14.0 20 <0.5 150.0 0.0 <0.5 150.0 0.0 <0.5 14.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21	OC2-PMW16C-0-27	7/11/06	<200	<0.25	1.69	56	<0.25	148	<0.5	152,000	1.82	0.525	1.31	<200	<0.5	41,900	70.9	4.03	0.575	4,630	22.4	<0.5	77,400	<0.5	3.73	7.69 J	<0.1	21.8
0C2-PMW1Fb-038 7712/06 <00	OC2-PMW17A-0-37	7/11/06																						<u> </u>	L			
0C2-PMW180-022 7/10/06 <00 0.304 J 2.37	OC2-PMW17A-0-38	7/13/06	<200	0.577	4.01	99.5	<0.25	378	<0.5	142,000	4.2	3	6.7	<200	<0.5	41,400	2,190	12.9	5.99	6,410	6.16	<0.5	194,000	<0.5	5.07	35.5	<0.1	25.5
OC2-PMW18A-0-22 7/10/06 < 200	OC2-PMW17B-0-38	7/12/06	<200	<0.25	1.18	32.6	<0.25	285	<0.5	166000	17.3	0.854	1.93	<200	<200	47300	0.691 J	2.2	1.51	5140	25	<0.5	95300	<0.5	4.64	22	<0.1	27.1
CC2-PMW18D-023 7/10/06 < 200 <0.25	0C2-PMW17C-0-39	7/12/06	<200	0.304 J	2.37	49.8	<0.25	81.8	<0.5	100000	4.05	0.42 J	0.939	<200	<0.5	21300	<0.5	4.33	0.578	4040	20.7	<0.5	46200	<0.5	5.14	13.4	<0.1	20.0
OC2-PMW19C-0-24 7/10/06 < 200	OC2-PMW18A-0-22	7/10/06	<200	0.406 J	1.52	32.7	<0.25	386	<0.5	258,000	5.59	0.622	2.57	<200	<0.5	76,300	0.532 J	3.26	0.434 J	8,900	27.9	<0.5	152,000	<0.5	3.99	7.44 J	<0.1	30.3
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	OC2-PMW18B-0-23	7/10/06	<200	<0.25	1.3	31.6	<0.25	302	<0.5	282,000	6.1	0.712	1.82	<200	<0.5	94,600	<0.5	3.28	0.375 J	6,530	57	<0.5	127,000	<0.5	4.41	9.01 J	<0.1	30.2
0C2-PMW20A-0-30 7/11/06 < 200 <0.25 0.907 38.7 <0.25 233 <0.5 175,000 13.7 0.488 J 1.69 <200 <0.5 42,100 5.84 1.2 J 0.589 5,170 12.3 <0.5 92,700 <0.5 3.34 9.66 J <0.1 23.4 0C2-PMW20B-0-31 7/11/06 < 200 <0.25 1.3 43.7 <0.25 242 <0.5 186,000 17.8 0.515 1.45 <200 <0.5 42,800 5.63 1.5 J 0.584 5,290 9.92 <0.5 93,200 <0.5 3.98 7.95 J <0.1 22.2 0C2-PMW20B-0-32 7/11/06 <200 2.99 30 66.2 <0.25 1.2 3 36.5 <0.25 293 <0.5 12300 3.16 J 0.723 <200 <0.5 15,400 151 3.12 1.04 5,130 <0.5 <0.5 6,900 <0.5 88,000 <0.5 2.08 <5 <0.1 19.7 0C2-PMW210-0-40 7/12/06 <200 <0.25 1.23 36.5 <0.25 293 <0.5 12300 3.16 J 0.723 <200 <0.5 27800 7.42 1.96 J 1.46 4870 6.98 <0.5 86700 <0.5 8700 <0.5 3.12 13.3 <0.1 23.4 0C2-PMW23B-0-13 7/77/06 <0.0 <0.25 0.831 52 <0.25 373 <0.5 137,000 3.06 0.77 1.01 <0.00 <0.5 31,800 122 2.77 1.55 4,720 8.51 0C2-PMW23B-0-14 7/7/06 <0.0 <0.25 0.303 J 2.97 33.4 <0.25 344 <0.5 125,000 2.07 0.306 J 3.58 <0.0 <0.5 37,700 67.3 9.38 3.29 5,600 5.34 <0.5 159,000 <0.5 159,000 <0.5 3.14 5.85 J <0.1 32.3 0C2-PMW23C-0-14 7/7/06 <0.0 0.274 J 2.79 29.9 <0.25 325 <0.5 122,000 1.77 0.269 J 0.767 <0.0 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 3.14 5.85 J <0.1 32.7 0C2-PMW23C-0-15 7/7/06 <0.0 0.274 J 2.79 29.9 <0.25 3.25 <0.5 122,000 1.77 0.269 J 0.767 <0.0 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 3.14 5.85 J <0.1 32.7 0.502 - 0.503 - 0.503 - 0.5 125,000 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	OC2-PMW18C-0-24	7/10/06	<200	<0.25	1.66	177	<0.25	78	<0.5	67,600	1.01	<0.25	0.652	<200	<0.5	24,300	3.22	4.94	<0.25	3,560	23.8	<0.5	40,400	<0.5	5.1	7.52 J	<0.1	22.6
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	OC2-PMW19-0-37	7/13/06	<200	0.382 J	1.56	15.6	<0.25	398	<0.5	188,000	0.36 J	1.94	1.76	<200	<0.5	57,600	1,100	35.3	4.82	6,880	<0.5	<0.5	159,000	<0.5	1.93	38.5	<0.1	25.6
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0C2-PMW19-0-34	7/12/06																	ŀ					<u> </u>]			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	OC2-PMW20A-0-30	7/11/06	<200	<0.25	0.907	38.7	<0.25	233	<0.5	175,000	13.7	0.488 J	1.69	<200	<0.5	42,100	5.84	1.2 J	0.589	5,170	12.3	<0.5	92,700	<0.5	3.34	9.66 J	<0.1	23.4
OC2-PMW21-0-40 7/12/06 <200 <0.25	OC2-PMW20B-0-31	7/11/06	<200	< 0.25	1.3	43.7	<0.25	242	<0.5	186,000	17.8	0.515	1.45	<200	<0.5	42,800	5.63	1.5 J	0.584	5,290	9.92	<0.5	93,200	<0.5	3.98	7.95 J	<0.1	22.2
OC2-PMW22-0-33 7/11/06 <200 <0.25 0.831 52 <0.25 373 <0.5 137,000 3.06 0.77 1.01 <200 <0.5 31,800 122 2.77 1.55 4,720 8.51 <0.5 88,700 <0.5 1.7 6.25 J <0.1 23.4 OC2-PMW23B-0-13 7/7/06 <200 <0.25 2.13 31.1 <0.25 316 <0.5 170,000 13.2 0.335 J 1.2 <200 <0.5 45,800 80.1 7.21 1.01 4,930 6.39 <0.5 126,000 <0.5 3.12 5.61 J <0.1 31.5 OC2-PMW23C-0-14 7/7/06 <200 0.303 J 2.97 33.4 <0.25 344 <0.5 125,000 2.07 0.306 J 3.58 <200 <0.5 37,700 67.3 9.38 3.29 5,600 5.36 <0.5 165,000 <0.5 3.14 5.85 J <0.1 32.3 OC2-PMW23C-1-15 7/7/06 <200 0.274 J 2.79 29.9 <0.25 325 <0.5 122,000 1.77 0.269 J 0.767 <200 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 1.4 5.85 J <0.1 32.7 OC2-PMW23C-1-15 7/7/06 <200 0.274 J 2.79 29.9 <0.25 325 <0.5 122,000 1.77 0.269 J 0.767 <200 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 3.14 5.85 J <0.1 32.7 OC3-PMW23C-1-15 7/7/06 <200 0.274 J 2.79 29.9 <0.25 325 <0.5 122,000 1.77 0.269 J 0.767 <200 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 3.14 5.85 J <0.1 32.7 OC3-PMW23C-1-15 7/7/06 <200 0.274 J 2.79 29.9 <0.25 325 <0.5 122,000 1.77 0.269 J 0.767 <200 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 3.14 5.85 J <0.1 32.7 OC3-PMW23C-1-15 7/7/06 <200 0.274 J 2.79 29.9 <0.25 325 <0.5 122,000 1.77 0.269 J 0.767 <200 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 3.14 5.85 J <0.1 32.7 OC3-PMW23C-1-15 7/7/06 <200 0.274 J 2.79 29.9 <0.25 325 <0.5 122,000 1.77 0.269 J 0.767 <200 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 3.14 5.85 J <0.1 32.7 OC3-PMW23C-1-15 7/7/06 <200 0.274 J 2.79 29.9 <0.25 325 <0.5 122,000 1.77 0.269 J 0.767 <200 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 3.14 5.85 J <0.1 32.7 OC3-PMW23C-1-15 7/7/06 <200 0.274 J 2.79 29.9 <0.25 325 <0.5 122,000 1.77 0.269 J 0.767 <200 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 31.4 5.85 J <0.5 159,000 <0.5 31.4 5.85 J <0.5 159,000 <0.5 31.4 5.85 J <0.5 159,000 <0.5 31.4 5.85 J <0.5 159,000 <0.5 31.4 5.85 J <0.5 159,000 <0.5 31.4 5.85 J <0.5 159,000 <0.5 31.4 5.85 J <0.5 159,000 <0.5 31.4 5.	OC2-PMW20C-0-32	7/11/06	<200	2.99	30	66.2	<0.25	122	<0.5	67,300	<0.25	0.316 J	0.723	<200	<0.5	15,400	151	3.12	1.04	5,130	<0.5	<0.5	88,000	<0.5	2.08	<5	<0.1	19.7
OC2-PMW23B-0-13 7/7/06 < 200 < 0.25 2.13 31.1 < 0.25 316 < 0.5 170,000 13.2 0.335 J 1.2 < 200 < 0.5 45,800 80.1 7.21 1.01 4,930 6.39 < 0.5 126,000 < 0.1 31.5 OC2-PMW23C-0-14 7/7/06 < 200	OC2-PMW21-0-40	7/12/06	<200	<0.25	1.23	36.5	<0.25	293	<0.5	123000	3.13	0.647	1.42	<200	<0.5	27800	7.42	1.96 J	1.46	4870	6.98	<0.5	85700	<0.5	3.12	13.3	<0.1	24.1
OC2-PMW23C-0-14 7/7/06 <200 0.303 J 2.97 33.4 <0.25 344 <0.5 125,000 2.07 0.306 J 3.58 <200 <0.5 37,700 67.3 9.38 3.29 5,600 5.36 <0.5 165,000 <0.5 3.57 11.3 <0.1 32.3 <0.25 PMW23C-1-15 7/7/06 <200 0.274 J 2.79 29.9 <0.25 325 <0.5 122,000 1.77 0.269 J 0.767 <200 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 3.14 5.85 J <0.1 32.7	OC2-PMW22-0-33	7/11/06	<200	<0.25	0.831	52	<0.25	373	<0.5	137,000	3.06	0.77	1.01	<200	<0.5	31,800	122	2.77	1.55	4,720	8.51	<0.5	88,700	<0.5	1.7	6.25 J	<0.1	23.4
OC2-PMW23C-1-15 7/7/06 <200 0.274 J 2.79 29.9 <0.25 325 <0.5 122,000 1.77 0.269 J 0.767 <200 <0.5 36,500 61.3 9 1.22 5,340 5.14 <0.5 159,000 <0.5 3.14 5.85 J <0.1 32.7	OC2-PMW23B-0-13	7/7/06	<200	<0.25	2.13	31.1	<0.25	316	<0.5	170,000	13.2	0.335 J	1.2	<200	<0.5	45,800	80.1	7.21	1.01	4,930	6.39	<0.5	126,000	<0.5	3.12	5.61 J	<0.1	31.5
	OC2-PMW23C-0-14	7/7/06	<200	0.303 J	2.97	33.4	<0.25	344	<0.5	125,000	2.07	0.306 J	3.58	<200	<0.5	37,700	67.3	9.38	3.29	5,600	5.36	<0.5	165,000	<0.5	3.57	11.3	<0.1	32.3
OC2.PMW/37D-0.16 7/7/06 200 0.25 1.1 37.1 c0.25 200 0.5 217.000 5.07 0.449.1 0.523 <200 0.753.1 3.09 0.49.1 4.800 74.5 <0.5 98.800 <0.5 3.69 5.89.1 <0.1 24.5	OC2-PMW23C-1-15	7/7/06	<200	0.274 J	2.79	29.9	<0.25	325	<0.5	122,000	1.77	0.269 J	0.767	<200	<0.5	36,500	61.3	9	1.22	5,340	5.14	<0.5	159,000	<0.5	3.14	5.85 J	<0.1	32.7
10-02-7-10147 111100 1-200 1-0.20 1-1.1 11.	OC2-PMW23D-0-16	7/7/06	<200	<0.25	1.1	37.1	<0.25	200	<0.5	217,000	5.07	0.449 J	0.523	<200	<0.5	65,800	0.753 J	3.09	0.49 J	4,800	74.5	<0.5	98,800	<0.5	3.69	5.89 J	<0.1	24.5

Concentrations in micrograms per liter (ug/L) Water samples filtered and preserved in Lab

Indicates analyte was not detected above the indicated method detection limit.

Indicates analyte was detected above the method detection limit but below the reported limit. Indicates the sample was not analyzed.

Table 10. Baseline Groundwater Sampling - June 2006: Anions, TDS, TKN and Total Cyanide Project Completion Report - Well Installation and Groundwater Monitoring Omega Chemical Operable Unit 2, Whittier, California

Onlega Chemical Ope	1	TDS				Total Cyanide	TKN				
Sample ID	Date	(Method 160.1)	Bromide	Chloride	Fluoride	Nitrate-N	Nitrite-N	Ortho phosphate-P	Sulfate	(Method 335.2)	(Method 351.3)
OC2-PMW12-0-1	7/6/06	840	0.686 J	112	0.41	4.62	0.0881 J	0.257 J	177	0.0057 J	0.639 J
OC2-PMW13B-0-2	7/6/06	1,260	0.79 J	122	0.666	8.34	<0.05	<0.25	452	0.0052 J	0.342 J
OC2-PMW13B-1-3	7/6/06	1,300	0.725 J	121	0.715	8.35	<0.05	<0.25	448	0.0069 J	0.185 J
OC2-PMW14-0-12	7/7/06	1400	0.688 J	64.8	0.313	10.2	<0.05	<0.25	287	<0.005	0.258 J
OC2-PMW15-0-17	7/10/06	1,090	0.948 J	78.4	0.301	9.32	<0.05	0.306 J	288	<0.005	0.137 J
OC2-PMW15-1-20	7/10/06	1,110	0.888 J	78.5	0.298	9.33	<0.05	0.282 J	289	<0.005	0.116 J
OC2-PMW15-5-21	7/10/06	1,070	0.945 J	78.1	0.3	9.29	<0.05	0.281 J	288	<0.005	0.317 J
OC2-PMW16A-0-25	7/11/06	2,970	3.27	362	0.232	9.58	<0.05	0.293 J	1,350	<0.005	
OC2-PMW16B-0-26	7/11/06	1,110	0.548 J	94.9	0.335	6.31	<0.05	<0.25	412	<0.005	
OC2-PMW16C-0-27	7/11/06	920	0.643 J	94.7	0.307	4.01	<0.05	<0.25	335	<0.005	
OC2-PMW17A-0-38	7/13/06									<0.005	0.593 J
OC2-PMW17A-0-37	7/11/06	1,270	0.869 J	88.6	0.301	5.19	<0.05	0.266 J	299		
OC2-PMW17B-0-38	7/12/06	1,030	0.601 J	75.1	0.268	10.3	<0.05	<0.25	332	<0.005	0.381 J
0C2-PMW17C-0-39	7/12/06	570	<0.1	38.5	0.327	4.3	<0.05	<0.25	180	<0.005	0.253 J
OC2-PMW18A-0-22	7/10/06	1,720	0.597 J	74.5	0.268	16	<0.05	<0.25	696	<0.005	0.0906 J
OC2-PMW18B-0-23	7/10/06	1,810	0.633 J	98.7 J	0.271	15.4	<0.05	<0.25	718	<0.005	0.224 J
OC2-PMW18C-0-24	7/10/06	430	0.368 J	76.2	0.42	4.63	<0.05	<0.25	66.3	<0.005	0.27 J
0C2-PMW19-0-34	7/12/06	1,260	1.08	112	0.257	0.205	<0.05	<0.25	313		
OC2-PMW19-0-37	7/13/06									<0.005	0.553 J
OC2-PMW20A-0-30	7/11/06	1,030	0.581 J	91.6	0.257	8.09	<0.05	<0.25	307	<0.005	
OC2-PMW20B-0-31	7/11/06	1,040	0.511 J	97.2	0.272	7.57	<0.05	<0.25	311	<0.005	
OC2-PMW20C-0-32	7/11/06	935	0.228 J	42	0.265	<0.05	<0.05	<0.25	133	<0.005	
OC2-PMW21-0-40	7/12/06	760	<0.1	76.9	0.261	6.73	<0.05	<0.25	149	<0.005	0.218 J
OC2-PMW22-0-33	7/11/06	845	0.416 J	100	0.231	7.12	<0.05	<0.25	192	<0.005	
OC2-PMW23B-0-13	7/7/06	1190	1.01	97.8	0.395	9.04	<0.05	<0.25	349	<0.005	0.42 J
OC2-PMW23C-0-14	7/7/06	1060	0.406 J	89.5	0.435	11	0.161	<0.25	252	<0.005	0.514 J
OC2-PMW23C-1-15	7/7/06	1030	0.421 J	90.2	0.448	11	0.16	<0.25	254	<0.005	0.55 J
OC2-PMW23D-0-16	7/7/06	1130	0.684 J	83.7	0.388	9.53	<0.05	<0.25	594	<0.005	0.201 J

Notes:

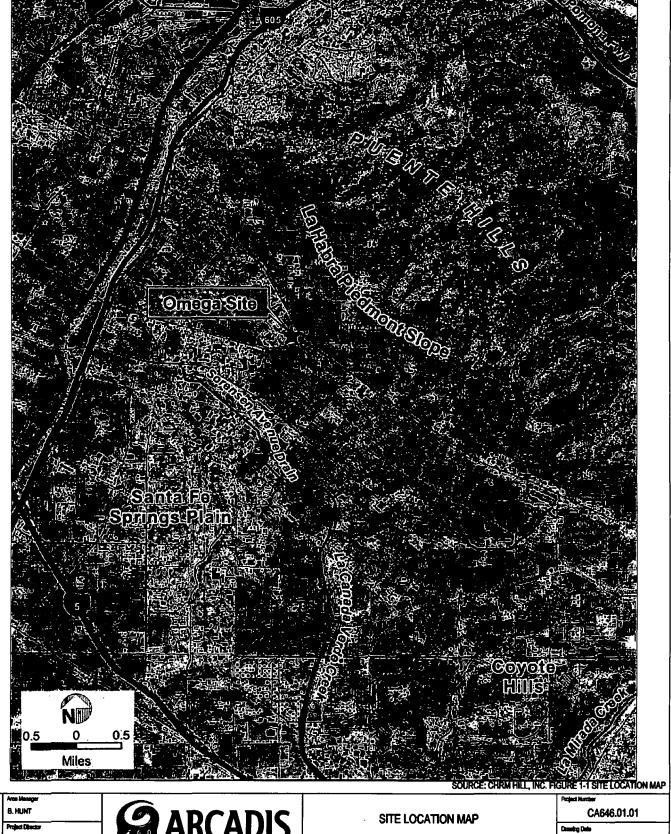
Concentrations in milligrams per liter (mg/L)

<### Indicates analyte was not detected above the indicated method detection limit.

J Indicates analyte was detected above the method detection limit but below the reported limit. Estimated value.

--- Indicates the sample was not analyzed.

Figures



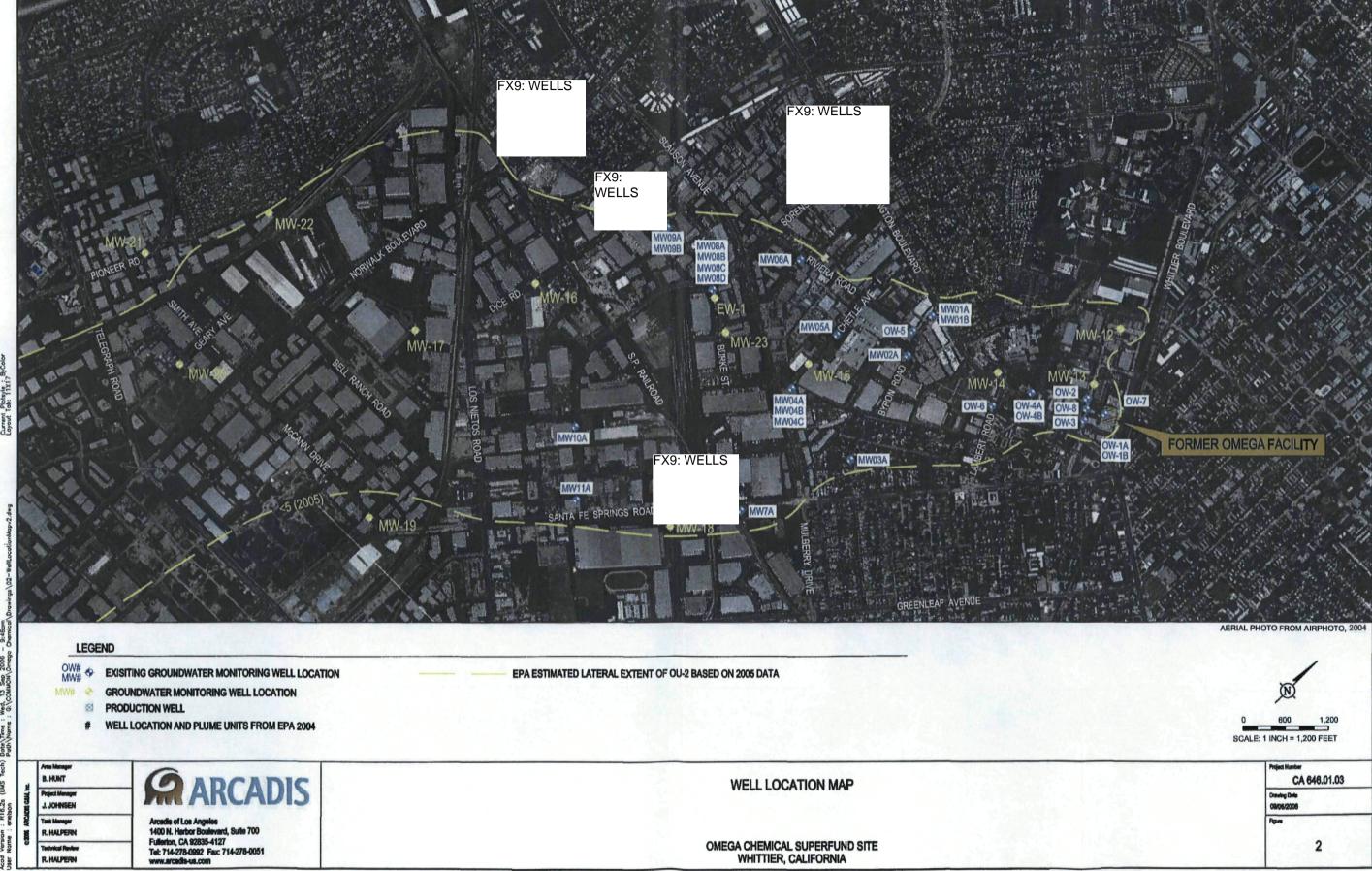
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R. HALPERN R. HALPERN **ARCADIS**

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OMEGA CHEMICAL SUPERFUND SITE WHITTIER, CALIFORNIA

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ARCADIS

Arcadis of Los Angeles

Arcadis of Los Angeles 1400 N. Harbor Boulevard, Suite 700 Fullerton, CA 92835-4127 Tel: 714-278-0992 Fax: 714-278-0051 TOPOGRAPHIC MAP

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Drawing Date 09/05/2006

OMEGA CHEMICAL SUPERFUND SITE WHITTIER, CALIFORNIA

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		OLDER DUNE SAND		SEMIPERCHED BELLFLOWER	
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SOURCE: CH2M HILL, INC. FIGURE 2-1 GENERALIZED STATIGRAPHIC COLUMN

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Project Director	ARCADIS	
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Task Manager	Arcadis of Los Angeles	
R. HALPERN	1400 N. Harbor Boulevard, Sulte 700	
2	E-Joseph CA 02025 4427	

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GENERALIZED STATIGRAPHIC COLUMN (BASED ON DATA FROM CDWR, 1961)

OMEGA CHEMICAL SUPERFUND SITE
WHITTIER, CALIFORNIA

Project Number	
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Figure	
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Appendix A

Weekly Status Reports

WEEKLY STATUS UPDATE

Omega Chemical OU-2 Week Ending August 19, 2005

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW23, MW16, MW18, MW17, MW13, MW12 and MW15 have been completed.
- Wells MW23, MW16, MW18, MW17, MW13 and OPOG well OW8b have been surveyed.

Work Completed Last Week (Ending August 19, 2005)

No field activities were performed during the week ending August 19, 2005. Administrative work, including preparation of status reports and tabulation of field data were continued during this week.

Work To Be Completed Next Week (Ending August 26, 2005)

The following activities are expected to be completed by end of August 26, 2005:

 No field activities are planned. In a telephone conversation between Tom Perina of CH2M Hill and John Johnsen of ARCADIS on August 24, 2005, it was decided to keep well PMW14, at its current location of 12300 Washington Boulevard – Unit F.

Issues to be Resolved

OSVOG plans to coordinate installation of PEW-1, PMW-14, PMW19, PMW20, PMW21, and PMW22 with EPA. Currently there are no issues regarding the locations of PEW-1 and PMW-14, but OSVOG would like to meet with EPA representatives to further discuss the planned placement of PMW19, PMW20, PMW21, and PMW22.

WEEKLY STATUS UPDATE

Omega Chemical OU-2 Week Ending August 12, 2005

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW23, MW16, MW18, and MW17 have been completed.

Work Completed Last Week (Ending August 12, 2005)

Boreholes PMW12 and PMW25 were completed using the sonic rig.

PMW12 was advanced to approximately 110 feet, with water first encountered at approximately 87 feet bgs in a 2-foot-thick, tight, clayey sand unit. The bottom of this (5-foot) sample run was at 90 feet bgs, in a tight Clay unit. EPA's contractor, CH2M Hill's on-site observer agreed that an attempt to collect a water sample in the clay unit would not be fruitful. The next saturated unit was encountered at 101 feet bgs. A water sample was collected at 102 feet bgs in a Sand unit. After comparing the screened interval with MW13, OW-8B, and in consultation with CH2M Hill's on-site observer, it was decided to install this well to a total depth of 102 feet, with a screened interval of 82 to 97 feet bgs.

Suspected hydrologic units encountered at this location include the following:

Based on Literature	(Bulletin 104)	Based on Observation						
Hydraulic Unit	Depth	Suspected Hydraulic Unit	Depth					
Bellflower	60-110	Bellflower	13-101					
Artesia		Artesia						
Gage		Gage						
Hollydale		Hollydale						
Jefferson	220-240	Jefferson	101-110+					
Lynwood	240-290	Beyond depth of well						

One depth-specific water sample was collected in PMW12 – at 102 feet bgs. Chemical results of this sample indicate the following analytes were detected:

Sample ID	Depth of Sample	PCE	TCE	1,1-DCE	Freon 11	Chloroform	Other
OC2- PMW12-	102 ft	3.1	470	19	ND<0.5	0.67	Benzene: 0.55
W-0-03							

Note: Concentrations in micrograms per liter (ug/L)

PMW15 was advanced to approximately 82 feet, with water encountered at approximately 38 feet bgs. Based on comparison of stratigraphy and well-completion of MW4A and MW5 (Weston, 2001), the vertical chemical profile, and in consultation with CH2M Hill, the well was completed with 2-inch diameter, schedule 80 PVC, with 0.01" slotted casing from 50 to 70 feet bgs. The sand pack chosen was #1C, due to fine sands in the saturated zone.

Suspected hydrologic units encountered at this location include the following:

Based on Literature (Bulletin 104)		Based on Observation		
Hydraulic Unit	Depth	Suspected Hydraulic Unit	Depth	
Bellflower	0-10	Bellflower	0-38	
Artesia	40-50	Artesia	38-75	
Gage	70-100	Gage	80+	
Hollydale	110-140	Beyond depth of well		
Jefferson	180-200	Beyond depth of well		
Lynwood	275-350	Beyond depth of well		

Four depth-specific water samples were collected in PMW15. Chemical results of this sample indicate the following analytes were detected:

Sample ID	Depth of Sample	PCE	TCE	1,1-DCE	Freon 11	Chloroform	Other
OC2- PMW15- W-0-03	45 ft	57	8.3	9.4	3.8	1.8	ND<0.5
-0-05	50 ft	1000 E	400 E	860 E	430 E	170 E	1,1 DCA: 3.0 1,2 DCA: 12 c-1,2 DCE: 6.6 Freon 12: 2.1

Sample ID	Depth of Sample	PCE	TCE	1,1-DCE	Freon 11	Chloroform	Other
-0-07	60 ft	200 E	120 E	170	71	39	1,1 DCA: 0.85 1,2 DCA: 3.8 c-1,2 DCE: 1.9 Toluene: 1.4
-0-08	70 ft	940 E	240 E	870 E	580 E	130 E	1,1-DCA: 2.6 1,2-DCA: 7.7 c-1,2-DCE: 3.2 Freon 12: 3.4 t-1,2-DCE: 0.85

Note: Concentrations in micrograms per liter (ug/L)

Sonic drilling of PMW14 was put off pending discussion of location with OSVOG and EPA.

Work To Be Completed Next Week (Ending August 19, 2005)

The following activities are expected to be completed by end of next week:

• Development of wells MW12 and MW15.

Issues to be Resolved

Location of well PMW14: In a conversation with CH2M Hill and with Chris Lichens of EPA on Wednesday August 10, 2005, EPA expressed concern regarding the health & safety of residents of the Sunshine Apartment Complex on Sunshine Avenue, north of the current proposed location of PMW14. The concern results from the likely migration of VOCs in groundwater beneath the apartment complex. EPA wanted to install a groundwater monitoring well immediately upgradient of the apartment complex. EPA suggested moving PMW14 to such a location. Ron Halpern of ARCADIS indicated to Mr. Lichens of EPA Region IX that the objective of PMW14 was to evaluate the continuum of the assumed core of the plume at a location that EPA has identified as downgradient of the Omega Chemical facility. The apartment complex is crossgradient and sufficiently far enough away from the assumed core of the plume such that, if PMW14 was moved, it would not meet the original objective. Mr. Lichens agreed that PMW14 should remain at its current location. After reviewing the Weston plume maps in regards to the above, Mr. Kerang Sun of CH2M Hill suggested moving PMW14 further east, closer to its original proposed location. Mr. Halpern indicated that that location (in Washington Boulevard) was unsuitable due to numerous underground utilities. Mr. Sun suggested putting the well in a nearby hospital parking lot. The hospital parking lot would be a suitable location for PMW14, providing EPA could obtain the appropriate access agreements to help prevent further schedule slippage. OSVOG currently plans to install PMW14 in conjunction with installation of PMW19, PMW21 and PMW22 to cut avoid additional costly mobilizations.

Installation of PEW-1, PMW-14, PMW19, PMW20, PMW21, and PMW22 will be completed when issues relating to the locations of the monitoring wells have been resolved. Currently there

E – Laboratory flag indicating detected concentration above calibration curve – estimated concentration.

Weekly Status Report Week Ending August 12, 2005 Page 4 of 4

are no issues relating to the placement of PEW-1, but installation will be postponed to minimize mobilization costs.

WEEKLY STATUS UPDATE

Omega Chemical OU-2 Week Ending August 5, 2005

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW23, MW16, MW18, and MW17 have been completed.

Work Completed Last Week (Ending August 5, 2005)

Sonic drilling of PMW12 began on Wednesday July 27, 2005, but was terminated at a depth of 50 feet bgs due to a damaged sonic head. A replacement was ordered and was originally scheduled to be on-site by Monday, August 1. The equipment was not available until Thursday, August 4. Drilling was therefore initiated on the afternoon of Thursday, August 4.

CPT investigation activities near the southern portion of the site investigation area was initiated on August 5. The CPT rig was unable to penetrate to a depth where groundwater could be collected. Attempts were made at two locations (PMW-19 and PMW20) prior to the effort being called off.

Work To Be Completed Next Week (Ending August 12, 2005)

The following activities are expected to be completed by end of next week:

• Completion of wells PMW12 and PMW15.

Issues to be Resolved

EPA contacted OSVOG representatives and suggested relocation of PMW-14. This issue will be discussed further during the week starting August 15.

WEEKLY STATUS UPDATE

Omega Chemical OU-2 Week Ending July 29, 2005

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW23, MW16, MW18, and MW17 have been completed.
- Irrigation line repair at the Catellus property (Burke & Beasor MW23)

Work Completed Last Week (Ending July 29, 2005)

Boreholes PMW12, PMW14 and PMW15 were cleared to 8 feet bgs using an air knife on Wednesday, July 27, 2005.

Sonic drilling of PMW12 began on Wednesday July 27, 2005, but was terminated at a depth of 50 feet bgs due to a damaged sonic head. A replacement has been ordered, and drilling was expected to resume Monday August 1st, but was later delayed by the driller until Friday August 5.

Work To Be Completed Next Week (Ending August 5, 2005)

The following activities are expected to be completed by end of next week:

- Re-initiation of Sonic drilling at well PMW12.
- Initiation of CPT investigation.
- Survey of wells completed to date.

Issues to be Resolved

No significant issues identified for this reporting period.

WEEKLY STATUS UPDATE

Omega Chemical OU-2 Week Ending July 22, 2005

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW23, MW16, MW18, and MW17 has been completed.
- Irrigation line repair at the Catellus property (Burke & Beasor MW23)

Work Completed Last Week (Ending July 22, 2005)

Coordination of CPT borings in vicinity of PMW19, PMW20, PMW21 and PMW22 has been completed – CPTs will be performed Friday August 5 and Monday August 8.

Coordination of Sonic Drilling at PMW12, PMW14 and PMW15 has been completed. City excavation permits obtained. Borehole clearance and drilling activities will start July 27, 2005.

Work To Be Completed Next Week (Ending July 29, 2005)

The following activities are expected to be completed by end of next week:

- Borehole clearance for PMW12, PMW14 and PMW15.
- Installation of well PMW12.
- Induction logging and Gamma Ray logging of MW23D (Thursday 7/28/05).
- An updated project schedule will be submitted with the weekly report for Week ending July 29, 2004.

Issues to be Resolved

No significant issues identified for this reporting period.

WEEKLY STATUS UPDATE

Omega Chemical OU-2 Week Ending July 15, 2005

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW-13, MW-16, MW-17, MW-18, and MW23, have been completed.

Work Completed Last Week (Ending July 15, 2005)

Coordination activities took place between OSVOG representatives, EPA's contractor (CH2M Hill), and representatives from the City of Santa Fe Springs and the City's consultant (Waterstone Environmental) to arrange for the sampling of the wells in the area of the Oil Filed Reclamation Project (OFRP). Late during the week, OSVOG was provided with a table of data that showed that data had been collected from remaining OFRP wells as recently as December of 2004. Based on this information, it has been determined that re-sampling the wells at this time would be of limited value. Therefore, plans to initiate well sampling during the week ending July 22, 2005 were cancelled.

Landscaping activities were undertaken to restore areas damaged during groundwater monitoring well installation activities.

Work To Be Completed Next Week (Ending July 22, 2005)

OSVOG will request bids from a limited number of firms with CPT capability and initiate planning for CPT work at or near the planned locations for PMW-20, PMW-21, and PMW-22. All proposed field activities will be coordinated with EPA's consultant CH2M Hill, and no field activities will take place prior to EPA's concurrence with the planned actions.

Note: Drilling activities are scheduled to begin on July 27, 2005. At that time the sonic drilling rig will be available, and will be mobilized to the site.

Issues to be Resolved

OSVOG will submit a revision to the sampling plan addendum that more accurately reflects the planned activities that will consist of a CPT rig drilling investigation at planned well locations PMW-20, PMW-21, and PMW-22.

Omega Chemical OU-2 Week Ending July 8, 2005

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW-13, MW-16, MW-17, MW-18, and MW23, have been completed.

Work Completed Last Week (Ending July 8, 2005)

Construction of well MW13 was completed on July 5, and well development took place on July 6.

The brief sampling addendum for the OFRP well sampling was submitted to EPA.

During the installation of MW-13 the following suspected hydraulic units were encountered:

Hydraulic Unit	Depth Range per Bulletin 104	Suspected Depth Range
Bellflower aquiclude	55-85 ft bgs	30-65 ft bgs
Artesia aquifer	Not present	Not encountered
Gage aquifer	Not present	Not encountered
Hollydale aquifer	Not present	Not encountered
Jefferson aquifer	185-205 ft bgs	118- 138+ ft bgs

During the drilling of MW-13, the subsurface conditions allowed for the collection of only one groundwater sample. The sample was collected from 127 feet bgs, and the sample result showed TCE at a concentration of 1.6 ug/l. No other constituents of concern were noted above the method detection limit.

The majority of waste water, drilling mud and soil has now been shipped from the various locations for proper disposal.

Work To Be Completed Next Week (Ending July 15, 2005)

OSVOG will await approval from EPA of the brief sampling plan addendum submitted by OSVOG to EPA detailing the planned procedures for collecting groundwater samples from the OFRP wells in the City of Santa Fe Springs. This effort is being undertaken to aid EPA and OSVOG in the decision of where to locate the wells planned for the southernmost investigation area.

OSVOG will finalize the access agreement with Catellus and initiate landscaping activities to repair damage caused during drilling activities.

Note: Drilling activities are now scheduled to begin the week of July 25, 2005. At that time the sonic drilling rig will be available, and will be mobilized to the site. During the week of July 18, 2005, based on EPA approval of the brief sampling plan addendum submitted the week of July 4, 2005, we intend to initiate sampling of the OFRP wells. This exercise is currently scheduled to begin on Tuesday, July 19, 2005.

Issues to be Resolved

OSVOG awaits approval of the brief sampling addendum that describes activities planned for sampling of the OFRP wells (discussed in more detail above).

Omega Chemical OU-2 Week Ending July 1, 2005

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW23, MW16, MW18 and MW-17 have been completed. Drilling and sampling of well MW-13 has been completed completion of well construction will be completed during week ending July 8, 2005.

Work Completed Last Week (Ending July 1, 2005)

Construction of well MW17 was completed on June 27th.

Drilling and sampling of well PMW13 commenced June 28th and was completed July 1st.

Well MW13 was advanced to 139 feet bgs. Suspected hydraulic units encountered during drilling operations are as follows:

Hydraulic Unit	Depth Range per Bulletin 104	Suspected Depth Range
Bellflower aquiclude	55-85 ft bgs	30-65 ft bgs
Artesia aquifer	Not present	Not encountered
Gage aquifer	Not present	Not encountered
Hollydale aquifer	Not present	Not encountered
Jefferson aquifer	185-205 ft bgs	118- 138+ ft bgs

Results for groundwater samples collected during the drilling of Well MW-13 will be reported in next week's report.

The well will be completed as follow:

Well ID	Screened Int.	Slot Size	Sand Pack Mat.	Hydraulic Unit
MW13A	56-66	0.02"	#2/16	Bellflower
MW13B	123-133	0.02"	#2/16	Jefferson

Work To Be Completed Next Week (Ending July 8, 2005)

The well box is expected to be constructed Tuesday July 5, 2005. Well MW13 will be developed.

Soil, mud and water-containing bins will be removed and appropriately disposed.

Note: To allow field personnel to rest and catch up on other projects, we are not planning to drill during the week of July 11-15, following completion of MW-13. Drilling activities will resume the following week using the Sonic drill rig. Drilling of well EW-1 will be deferred until the planned second mobilization of the mud-rotary rig, once a suitable location for PMW-22 has been agreed upon with EPA Region 9 representatives. This brief hiatus from drilling activity is not expected to have a significant impact on the overall project schedule. Other work planned for the week of July 11-15 will continue as proposed.

Issues to be Resolved

Currently awaiting resolution to access at the Catellus Property on Burke Street. Upon resolution, landscape repairs at MW-23 will take place, and construction of well EW-1 can be completed.

It was discussed previously that the gauging and sampling of the City of Santa Fe Springs OFRP wells would be completed prior to CPT sampling or drilling of wells PMW19-PMW22.

Omega Chemical OU-2 Week Ending June 24, 2005

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW23, MW16, MW18 have been installed. Installation of MW-17 is being completed.

Work Completed Last Week (Ending June 24, 2005)

Drilling and sampling activities at PMW17 was completed last week.

Well MW17 was advanced to 190 feet bgs. Suspected hydraulic units encountered during drilling operations are as follows:

Hydraulic Unit	Depth Range per Bulletin 104	Suspected Depth Range
Bellflower aquiclude	30-70 ft bgs	30-71 ft bgs
Artesia aquifer	60-100 ft bgs	92-106 ft bgs
Gage aquifer	110-150 ft bgs	115-130 ft bgs
Hollydale aquifer	175-230 ft bgs	170+ bgs

Groundwater samples (prefixed with OC2-PMW17-W-) were collected at the following depths:

Sample Depth (ft bgs)	Sample ID	PCE (µg/L)	TCE (µg/L)	1,1 DCE (μg/L)	Freon 11 (µg/L)	Chloroform (µg/L)
51.5	-0-04	< 0.5	<0.5	<0.5	<0.5	<0.5
97	-0-06	240	130	75	23	1.6
117	-0-08	5.2	27	1	0.56	<0.5
147	-0-09	< 0.5	<0.5	<0.5	<0.5	<0.5
172	-0-12	0.83	15	<0.5	<0.5	<0.5
182	-0-13	0.89	10	<0.5	<0.5	<0.5
192	-0-15					

The well will be completed as follow:

Well ID	Screened Int.	Slot Size	Sand Pack Mat.	Hydraulic Unit
MW17A	56-71	0.02"	#2/16	Bellflower
MW17B	94-104	0.02"	#2/16	Artesia
MW17C	172-182	0.02"	#2/16	Hollydale

Work To Be Completed Next Week (Ending July 1, 2005)

The construction of MW-17 is expected to be completed on Monday, June 27, 2005. The well box will be completed on Tuesday June 28, 2005.

It is expected that an excavation permit for drilling activities in the City of Whittier will be acquired by June 27 or June 28, 2005.

The installation of well MW-13 will be in progress. It is anticipated that the drilling activities will be completed by Friday, July 1, 2005, with well construction to be completed on Tuesday July 5, 2005. Development activities will follow well completion.

Issues Pending

Currently awaiting resolution to access at the Catellus Property on Burke Street. Verbal agreement has been reached, but OSVOG is waiting for written memorialization of the agreement. Upon resolution, landscape repairs at MW-23 will take place, and construction of well EW-1 can be commenced.

It was discussed previously that the gauging and sampling of the City of Santa Fe Springs OFRP wells would be completed prior to CPT sampling or drilling of wells PMW19-PMW22.

Due to some scheduling conflicts, it is anticipated that there will be a small break between completion of well EW-1 and the Sonic drilling. This is not expected to have a significant impact on the overall project schedule.

Soil and drilling mud in roll-off bins are awaiting disposal. Profile samples have been collected and submitted to the waste-disposal contractor.

Have requested but not yet received Weston well survey report from EPA/CH₂M Hill.

STATUS UPDATE Omega Chemical - OU2 Week Ending June 17, 2005

Tasks Completed To Date

- City of Santa Fe Springs excavation permits in place.
- Dig Alert notified for all well locations (not including alternate locations)
- Well construction permits from LA County Department of Health Services received.
- Geophysical survey of well locations PMW15, -16, -17, -18 and -23 completed 05/06/05.
- Borings PMW13, PMW16, PMW18, PMW23 cleared using air knife.
- Well MW23 completed to 190 feet.
- Well MW16 completed to 180 feet.
- Well MW18 completed to 190 feet.

Tasks in Progress

- Application for Encroachment Permits for wells in street City of Whittier
- Identification and contact with private property owners for access
- Installation of well PMW18 in progress.

Stratigraphic units encountered for MW-18 during drilling operations are as follows:

Based on Literature (Bulletin 104)		Based on Observation	
Hydraulic Unit	Depth	Suspected Hydraulic Unit	Depth
Bellflower	0-30	Bellflower	0-54
Artesia	Not	Artesia	
	Present_		
Gage	30-60	Gage	54-80
Hollydale	66-96	Hollydale	88-120
Jefferson	130-146	Jefferson	180-?
Lynwood	200-270	Beyond depth of well	

Chemical results of water samples at the MW-18 location are summarized (for PCE, TCE, 1.1-DCE, Freon and Chloroform) below.

Depth	PCE	TCE	11 DCE	Freon 11	Chloroform
	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
52	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
67	1.1	1.5	ND<0.5	ND<0.5	ND<0.5
77	1.2	ND<0.5	ND<0.5	ND<0.5	ND<0.5
87	0.96	ND<0.5	ND<0.5	ND<0.5	ND<0.5
97	ND<0.5	0.5	ND<0.5	ND<0.5	ND<0.5
115	0.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Depth	PCE	TCE	11 DCE	Freon 11	Chloroform
	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
128	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
148	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
158	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
177	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
187	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Note - n/c = not collected

ND = not detected above reporting limit

Concentrations of the VOCs listed above were not detected in trip blanks, field blanks, or equipment blanks collected during sampling procedures for well PMW18.

Water samples were not retrieved at the 107 or at 168 foot depths due to malfunctions relating to Simulprobe equipment. No sample was collected at, 138 feet due to the presence of clays.

Well screens were installed based on the observed stratigraphy, e-logs and chemical profiles. The screens were set as follows:

MW18A From 56 - 71

MW18B from 90 - 100

MW18C 146-161

Wells were designed in consultation with EPA's contractor (CH2M Hill's on-site representative).

Issues to be Resolved

- Encroachment agreement for City of Whittier
- Authorization of change order for the change in scope of work. ARCADIS will
 continue to work until originally allocated funds are expended.

Upcoming Work

- Well PMW17 will be begin on Tuesday 6/21/05.
- Well MW18 will be developed Thursday 6/23/05
- E-Logging of MW23D (deep) will be put off until completion of PMW17 the resistivity/induction probe was unavailable until 6/17/05.
- Replace sod at MW23, MW16, and MW18 locations; replace trees at MW16 and MW18 locations.

^{* =} sample may be drilling mud

STATUS UPDATE Omega Chemical - OU2 Week Ending June 10, 2005

Tasks Completed To Date

- City of Santa Fe Springs excavation permits in place.
- Notification to adjacent property owners of upcoming drilling activity, possible noise, etc.
- Dig Alert notified for all well locations (not including alternate locations)
- Well construction permits from LA County Department of Health Services received.
- Geophysical survey of well locations PMW15, -16, -17, -18 and -23 completed 05/06/05.
- Borings PMW13, PMW16, PMW18, PMW23 cleared using air knife.
- Well MW23 was completed to 190 feet. The deep screened interval is 175 185 feet, the intermediate screened interval is 145-160 feet, and the shallow interval is 87-97 feet. Should the adjacent well (approximately 60 feet from MW-23) prove to be in good condition, sampling may also be possible at an interval screened from 30-50 feet.
- Well MW-16 was completed to a depth of 180 feet. The wells were screened as follows: MW16A (shallow) 45 to 60 feet, with TD=65 feet; MW16B (intermediate) 106 to 116 feet, with TD=121 feet; MW16C (deep) 149 to 164 feet, with TD=169 feet.

Chemical results of water samples are summarized (for PCE, TCE, 1,1-DCE, Freon and Chloroform) below.

1 10011 all	1 Took and onlorololling bolow.					
Depth	PCE	TCE	11 DCE	Freon 11	Chloroform	
	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	
50	n/c	n/c	n/c	n/c	n/c	
57	39	14	30	0.64	ND<0.5	
62	21	8.5	19	ND<0.5	ND<0.5	
72	46	38	9.3	4.8	1.2	
72-Dup	46	38	8.9	4.8	1.2	
82	14	16	2.5	1.4	2.2	
92*	ND<0.5	0.54	ND<0.5	ND<0.5	ND<0.5	
123	ND<0.5	2.3	ND<0.5	ND<0.5	ND<0.5	
133	ND<0.5	21	ND<0.5	ND<0.5	ND<0.5	
142*	ND<0.5	1.3	ND<0.5	ND<0.5	ND<0.5	
162	ND<0.5	1.2	ND<0.5	ND<0.5	ND<0.5	
172	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
182	n/c	n/c	n/c	n/c	n/c	

Note - n/c = not collected

ND = not detected above reporting limit

^{* =} sample may be drilling mud

Tasks in Progress

- Application for Encroachment Permits for wells in street City of Whittier ("Comfort letter" re future well removal from EPA in progress)
- Identification and contact with private property owner (Catellus) for access (for occasional, temporary entry, e.g., for drilling rig outrigger, repair of landscape damage, etc.)
- Installation of well PMW18 is in progress. As of June 10, well boring PMW18
 was advanced to a total depth of 20 feet using the mud rotary drilling
 technique. Water was not encountered when drilling ceased on June 10.

Issues to be Resolved

- Encroachment agreement for City of Whittier awaiting "comfort letter" re future well removal from EPA and Whittier's response.
- License Agreement with Catellus for access to property adjacent to MW-23 and PEW-1 – awaiting "comfort letter" re future well removal from EPA and Catellus' response.
- Authorization of change order for the change in scope as it relates to the original cost estimate/request for proposal and the revised scope. ARCADIS will continue to work until originally-allocated funds are expended.

Upcoming Work

- Drilling of Well PMW18 will continue during the week ending June 17. Total
 depth may be achieved during the week. Well screening intervals will be
 discussed with EPA's consultant CH2M Hill prior to finalization of the
 screened intervals. Well development activities are expected to be completed
 on this well during the week ending June 24.
- Equipment set-up and drilling at the PMW-17 location may be initiated as early as June 20, and well construction/development may be completed as soon as June 30th.
- ARCADIS will research access issues associated with the first phase of CPT work during the week of June 13. CPT work may be initiated by the week of June 27.
- A Workplan for sampling of the wells identified in the OFRP area of Santa Fe Springs should be submitted to EPA for review during the week of June 13, 2005.
- Replace sod at MW23 and MW16 locations; replace tree at MW16 location.
 Sod replacement at MW23 will follow finalization of the access agreement with Catellus.

STATUS UPDATE Omega Chemical - OU2 Week Ending June 3, 2005

Tasks Completed To Date

- City of Santa Fe Springs excavation permits in place.
- Notification to adjacent property owners of upcoming drilling activity, possible noise, etc.
- Dig Alert notified for all well locations (not including alternate locations)
- Well construction permits from LA County Department of Health Services received.
- Geophysical survey of well locations PMW15, -16, -17, -18 and -23 completed 05/06/05.
- Borings PMW13, PMW16, PMW18, PMW23 cleared using air knife.
- Well MW23 was completed to 190 feet. The deep screened interval is 175 185 feet, the intermediate screened interval is 145-160 feet, and the shallow interval is 87-97 feet. Should the adjacent well (approximately 60 feet from MW-23) prove to be in good condition, sampling may also be possible at an interval screened from 30-50 feet.

Tasks in Progress

- Application for Encroachment Permits for wells in street City of Whittier ("Comfort letter" re future well removal from EPA in progress)
- Identification and contact with private property owner (Catellus) for access (for occasional, temporary entry, e.g., for drilling rig outrigger, repair of landscape damage, etc.)
- Installation of well PMW16 in progress. Well boring PMW16 was advanced to a total depth of 180 feet using mud rotary. On Friday, June 3, 2005, Pacific Surveys electronically logged the borings using SP, resistivity, gamma ray, caliper and Laterolog methods.

Stratigraphic units believed to have been encountered during drilling operations are as follows:

Based on Literature (Bulletin 104)		Based on Observation	
Hydraulic Unit	Depth	Suspected Hydraulic Unit	Depth
Bellflower	25-45	Bellflower	14-35
Artesia	45-75	Artesia	35-57
Gage	80-110	Gage	90-120
Hollydale	140-180	Hollydale	140-170
Jefferson	215-235	Beyond depth of well	
Lynwood	385-455	Beyond depth of well	

Chemical results of water samples are summarized (for PCE, TCE, 1,1-DCE, Freon and Chloroform) below.

Depth	PCE	TCE	11 DCE	Freon 11	Chloroform
	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
50	n/c	n/c	n/c	n/c	n/c
57	39	14	30	0.64	ND<0.5
62	21	8.5	19	ND<0.5	ND<0.5
72	46	38	9.3	4.8	1.2
72-Dup	46	38	8.9	4.8	1.2
82	14	16	2.5	1.4	2.2
92*	ND<0.5	0.54	ND<0.5	ND<0.5	ND<0.5
123	ND<0.5	2.3	ND<0.5	ND<0.5	ND<0.5
133	ND<0.5	21	ND<0.5	ND<0.5	ND<0.5
142*	ND<0.5	1.3	ND<0.5	ND<0.5	ND<0.5
162	ND<0.5	1.2	ND<0.5	ND<0.5	ND<0.5
172	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
182	n/c	n/c	n/c	n/c	n/c

Note - n/c = not collected

ND = not detected above reporting limit

Concentrations of VOCs were not detected in trip blanks, field blanks, or equipment blanks collected during sampling procedures for well PMW16.

Water samples were not collected at 50 feet, 102, 112, and 152 feet due to insufficient water. In gravelly soil, water samples appeared to be of the same consistency as drilling mud. The Simulprobe can only be advanced 2 feet ahead of the bottom of the drill bit. In gravelly soil, it is possible the mud also advanced this far, making the lab results for the indicated (*) depths suspect.

Electronic logs, in general, support the definition of coarse and fine layers as described on field boring logs.

Issues to be Resolved

- Encroachment agreement for City of Whittier awaiting "comfort letter" re future well removal from EPA and Whittier's response.
- License Agreement with Catellus for access to property adjacent to MW-23 and PEW-1 – awaiting "comfort letter" re future well removal from EPA and Catellus' response.
- Authorization of change order for the change in scope as it relates to the original cost estimate/request for proposal and the revised scope. ARCADIS will continue to work until originally-allocated funds are expended.

Upcoming Work

Well PMW16 will be completed week ending 6/10/05. The wells will be screened as follows: MW16A (shallow) 45 to 60 feet, with TD=65 feet; MW16B (intermediate) 106 to 116 feet, with TD=121 feet; MW16C (deep) 149 to 164 feet, with TD=169 feet.

^{* =} sample may be drilling mud

- Equipment will be de-contaminated Tuesday. Well MW16 will be developed using air-lift also on Tuesday, with additional development, if needed Wednesday 6/8/05.
- Equipment will be set up on Well PMW18 next week Wednesday or Thursday. Barring any delays, drilling at the PMW-18 location may be initiated on June 9, 2005 and drilling may be completed by June 15. If this is accomplished, well construction of MW-18 will take place on June 16, followed by well development on June 17.
- Equipment set-up and drilling at the PMW-17 location may be initiated as early as June 20, and well construction/development may be completed as soon as June 30th.
- ARCADIS will research access issues associated with the first phase of CPT work during the week of June 13. CPT work may be initiated by the week of June 27.
- A Workplan for sampling of the wells identified in the OFRP area of Santa Fe Springs should be submitted to EPA for review during the week of June 13, 2005.
- Replace sod at MW23 and MW16 locations; replace tree at MW16 location.

STATUS UPDATE Omega Chemical - OU2 May 31, 2005

Tasks Completed To Date

- City of Santa Fe Springs excavation permits in place.
- Dig Alert notified for all well locations (not including alternate locations)
- Well construction permits from LA County Department of Health Services received.
- Geophysical survey of well locations PMW15, -16, -17, -18 and -23 completed 05/06/05.
- Borings PMW13, PMW16, PMW18, PMW23 cleared using air knife.

Tasks in Progress

- Application for Encroachment Permits for wells in street City of Whittier
- Identification and contact with private property owners for access
- Installation of well MW23 at Burke and Beasor continued. During the week
 the well was drilled to a final depth of 190 feet below grade. Based on the
 chemical concentrations in groundwater, the lithology encountered, and the
 presence of a shallow-screened well within approximately 60 feet of the MW23 location, the following well screening depths were chosen:

First Screened Interval 87 – 97 102 feet bgs Second Screened Interval 145 – 160 165feet bgs Third Screened Interval 175 – 185 190feet bgs.

According to information provided by CH2M Hill, the well adjacent to this location is screened from 30 – 50 feet bgs.

Issues to be Resolved

- Encroachment agreement for City of Whittier
- Access/License Agreement with Catellus. The property owner of the land immediately adjacent to MW-23 and PEW-1 is requiring the completion of a license agreement prior to any further work being performed on their property. Unfortunately, the tight space requirements at the drilling locations necessitate access a few feet onto the property adjacent to the City of Santa Fe Springs land at these locations. Landscape work will also be required at these locations.

Upcoming Work

- Well PMW23 will be built and initial well development will take place during week ending 6/03/05.
- The three wells associated with the Monitoring Well 16 cluster will be installed and developed.

Other Issues

- Due to the presence of heaving sands in the subsurface formation, the
 well drillers recommended that the ARCH drilling technique be replaced by
 mud-rotary drilling. After discussions between ARCADIS and EPA's
 technical consultant, CH2M Hill, it was agreed that mud-rotary drilling
 would be utilized at the locations where the multi-port wells are being
 installed.
- EPA's consultant has requested that upon completion of the well drilling at
 the locations utilizing the mud-rotary drilling technique, that wells be
 logged using Electronic Log, Gamma Ray/Resistivity Log, Caliper Log and
 that the Latero Logging technique also be utilized. The work plan as
 approved by EPA stated that these logging techniques may be utilized if
 mud-rotary drilling is used. The estimated cost associated with this
 additional effort is approximately \$3,000/well.
- The necessity to convert from the ARCH drilling technique to the mudrotary drilling will result in an increase in the amount of waste material generated during the well installation activities. This will in turn increase costs associated with the waste disposal efforts.

STATUS UPDATE Omega Chemical - OU2 May 23, 2005

Tasks Completed To Date

- City of Santa Fe Springs excavation permits in place.
- Dig Alert notified for all well locations (not including alternate locations)
- Well construction permits from LA County Department of Health Services received.
- Geophysical survey of well locations PMW15, -16, -17, -18 and -23 completed 05/06/05.
- Borings PMW13, PMW16, PMW18, PMW23 cleared using air knife.

Tasks in Progress

- Identification and contact with private property owners for access
- Installation of well PMW-23 at Burke and Beasor. By May 20th, the boring was advanced to 150 feet below grade, with depth-discrete groundwater samples collected at 42, 52, 62, 82, 92, 132, 142 and 152 feet bgs. Groundwater was first encountered at 36 feet bgs. A water sample was not collected from 72 feet, despite two attempts to collect. Water samples were not collected at 102, 112, and 122 feet bgs due to the presence of tight silty clay. Drilling was switched over to mud rotary from approximately 132 feet bgs due to heaving sands. The drive casing was raised at that time to approximately 120 feet bgs. One bin of soil has been generated and profiled, pending disposal.

The Gage aquifer was encountered from approximately 32 to 47 feet bgs; The Hollydale aquifer extends from approximately 47 to 97 feet bgs; The Jefferson aquifer appears to start at 132 feet bgs;

Chemical results of water samples are summarized (for PCE, TCE, 1,1-DCE, Freon and Chloroform) below.

Treem and emicroterm, below:					
Depth	PCE	TCE	11 DCE	Freon 11	Chloroform
	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
42	600	520	310	57	140
52	63	79	44	12	26
62	660	580	430	110	140
72					
82	69	100	39	9.2	18
92	36	31	3.2	ND<0.5	0.60
132	3.1	80	0.53	ND<0.5	0.76
142	ND<0.5	1.6	ND<0.5	ND<0.5	ND<0.5
152	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Issues to be Resolved

 Encroachment agreement for City of Whittier – awaiting response from the EPA regarding long-term ownership/liability.

Upcoming Work

 Well PMW23 will be completed week ending 5/27/05. Well PMW16 will be the next well to be drilled.

STATUS UPDATE Omega Chemical - OU2 May 16, 2005

Tasks Completed To Date

- Field activities were initiated during the week of May 9, 2005. Primarily these
 activities consisted of clearing areas to be drilled utilizing Dig Alert,
 Geophysical Surveying and Air Knife work.
- Well PMW-13 in the City of Whittier and well PMW-23 in the City of Santa Fe Springs were both cleared prior to the planned drilling start date of May 16, 2005. Due to issues relating to the City of Whittier Encroachment Permit, the decision was made on May 13 to initiate drilling activities at the PMW-23 location.
- CH2M Hill was kept up to date of the planned drilling activities and utility clearance work.

Tasks in Progress

- Drilling activities will be initiated at the PMW-23 location on May 16, 2005. It
 is expected that the drilling activities at this location will last through the week
 of May 16 and into the week of May 23, 2005.
- Sampling results from the drilling operation will be provided to CH2M Hill as they become available, and the available results will be summarized during the next weekly report.
- Available geological data relating to water-bearing zones will be reviewed with CH2M Hill and the planned screened intervals for the wells may be modified based on field data.

Issues to be Resolved

- Whittier has approved OSVOG's access to its property for the purpose of installing four monitoring wells, subject to its standard terms of encroachment.
- Whittier requires \$1,000,000 in insurance and an agreement to indemnify the
 City against any claims arising out of the encroachment. These are standard
 requirements that the City required OPOG to execute a similar agreement.
 OSVOG will provide the insurance and the indemnity protection while it is
 installing the wells and conducting the first round of sampling. Once that work
 is finished, however, OSVOG will assign the wells to EPA, at which point EPA
 will need to provide the appropriate assurances to the City of Whittier.
 OSVOG is awaiting EPA confirmation that EPA will accept those conditions

so that OSVOG will be released from further indemnity and insurance responsibilities upon completion of the work specified in the UAO.

Upcoming Work

- Continue development of PMW 23.
- Start drilling well PMW 16. If the City of Whittier encroachment issues are resolved before starting on PMW 16, then PMW 13 will be started instead.

STATUS UPDATE Omega Chemical - OU2 May 9, 2005

Tasks Completed To Date

- City of Santa Fe Springs excavation permit in place.
- Well inspection fees paid for wells to be drilled in City of Santa Fe Springs.
- Dig Alert notified for all well locations (not including alternate locations)
- Well construction permits from LA County Department of Health Services received.
- Geophysical survey of well locations PMW15, -16, -17, -18 and -23 completed 05/06/05.

Tasks in Progress

- Application for Encroachment Permits for wells in street City of Whittier
- Well permits and an excavation permit have been issued by Santa Fe Springs for the well locations.

Issues to be Resolved

 Encroachment agreement for City of Whittier – The encroachment agreement between Whittier and OSVOG has been signed by OSVOG, allowing predrilling activities to take place; however, long-term issues, such as indemnity and insurance following assignment of wells to EPA needs to be resolved. Initiation of field work at the PMW-13 location is scheduled for May 10, but is dependent upon finalization of the agreement.

Upcoming Work

- Air knife work to clear planned well locations will be initiated on May 10, 2005.
- Assuming issues relating to the encroachment permit with the City of Whittier are resolved, ARCH drilling will commence with PMW-13, beginning 05/16/05.
- CPT borings originally planned for approximately 05/23/05 may be postponed pending the development and implementation of a sampling plan for the City of Santa Fe Springs wells near EPA's estimated leading edge of the regional plume.

STATUS UPDATE Omega Chemical - OU2 Week of April 18, 2005

Tasks Completed

- On Friday, April 15, 2005 representatives of OSVOG met with representatives from the City of Santa Fe Springs (the City). This meeting was requested by the City and it was the understanding of OSVOG that the City wished to have information regarding the upcoming site investigation activities associated with the work OSVOG is performing as directed by U.S. EPA, Region 9. At that meeting, the City provided information regarding existing monitoring wells in close proximity to the locations of some of the more southerly Omega OU-2 planned well installation locations.
- Due to the lack of response from private property owners regarding access for well installation, locations may be altered. Alternative locations for the wells proposed on private properties have been identified in the public rightof-way.

Tasks in Progress

- Application for Encroachment Permits for wells in street (one in city of Whittier, the rest in Santa Fe Springs). – Cities of Whittier and Santa Fe Springs reviewing request for Encroachment Permits.
- Continue to attempt contact with private property owners for access. Not all of the public information regarding the names and locations of the property owners of record is current.
- OSVOG has performed a cursory review of the data provided by the City. The data shows that there was a monitoring well (City of Santa Fe Springs Well MW-1) installed in what is depicted by Weston/CH2M Hill as the plume fringe (within 500 feet of the planned location of PMW-20). Well construction information shows the well to be screened in the shallow groundwater bearing zone from approximately 55 to 91 feet below ground surface (bgs). In addition to this well, several other wells were installed by the City in the vicinity of the planned investigation. Wells that may provide meaningful data regarding groundwater concentrations in the area include MW-30, MW-25, MW-24, MW-23, and MW-18. According to soil drilling logs these wells all appear to be screened in the shallow groundwater bearing zone.

Issues to be Resolved

An attempt will be made to locate and sample the existing wells in Santa Fe
Springs to better define the current conditions. In an effort to keep the project
moving forward in a timely manner, ARCADIS has conducted the cursory
review and will be attempting to locate the wells on April 21 and 22, 2005.

Upcoming Work

- The City of Santa Fe Springs is also being provided additional information regarding wells that were planned for private property that may need to be installed in the public right-of-way. No delays in terms of obtaining access from the City of Santa Fe Springs are expected as a result of this change.
- The City of Whittier has been provided with proposed well location maps that
 depict wells on City of Whittier property. A report describing the planned well
 installations and locations has been prepared by city employees and will be
 presented to the City Council during the April 26 City Council meeting.
 Approval of the well locations is expected at that time.
- Confirm well locations with drilling contractors and make minor adjustments to well locations, if required.

Weekly Update Meeting Omega Chemical - OU2 March 30, 2005

ACCESS ISSUES

- City of Whittier will now require approval by City Council for well installations.
 Currently this is scheduled for the April 26, 2005 City Council Meeting
 - D. Mochizuki currently out of town. He will return on 4/4/05.
- City of Santa Fe Springs requested additional information regarding well locations. ARCADIS currently addressing the request by preparing detailed package regarding well locations.
- Meeting scheduled for April 15, 2005 at City of Santa Fe Springs to discuss project issues and access issues

Project Budget Explanation Request

 ARCADIS preparing a letter explaining changes to the projected costs of completing the work.

STATUS UPDATE Omega Chemical - OU2 February 16, 2005

Tasks Completed To Date

- RI Workplan
- Field Sampling Plan
- Quality Assurance Project Plan (see note below)
- Health & Safety Plan
- Submitted proposed baseline schedule for field activities (attached)
- Transmittal of FSP to City of Santa Fe Springs Department of Public Works,

Tasks in Progress

- Well Construction Permits submitted
- Property acquisition activities ongoing

Issues to be Resolved

 Access agreements to well locations on private property, in particular for PMW13

Upcoming Work

 Work will commence with installation of CPT borings on downgradient edge of plume. Initiation of this work is contingent upon finalization of access agreements/right-of-way permits.

STATUS UPDATE Omega Chemical - OU2 February 9, 2005

Tasks Completed To Date

- RI Workplan
- Field Sampling Plan
- Quality Assurance Project Plan (see note below)
- Health & Safety Plan

Tasks in Progress

- Well Construction Permits submitted
- Re-establish baseline schedule for field activities
- Implementation of Subcontractor Agreements
- Transmittal of FSP to City of Santa Fe Springs Department of Public Works, (Should be transmitted by COB 02/09/05)

Issues to be Resolved

 Access agreements to well locations on private property, in particular for PMW13

Upcoming Work

 Work will commence with installation of CPT borings on downgradient edge of plume. Initiation of this work is contingent upon finalization of access agreements/right-of-way permits.

Omega Chemical OU-2 Week Ending August 18, 2006

Work Completed To Date

The following activities have been completed to date:

- The FSP and QAPP have been competed and approved.
- Well permits from the LA County DHS have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23 and EW-1 have been completed.
- All wells have been developed. Development water disposed of.
- Dedicated bladder pumps installed in all wells except MW-13A, MW-17A and MW-19 (due to little to no water present).
- All groundwater monitoring wells sampled. Samples sent to E-Max for chemical analysis. Included in samples: 10 percent duplicates and QC samples.

Work Completed Last Week (Ending August 18, 2006)

Report generation in progress.

Work to Be Completed This Week (Ending August 25, 2006)

Level III QC data in progress. Survey data was further revised for QC errors. Continued preparation of report

Planned Activities for Week Ending September 1, 2006

Continue report generation.

It is currently anticipated that the Draft Well Installation and Sampling Report will be submitted to EPA on September 26, 2006.

Issues to be Resolved

None to report.

Omega Chemical OU-2 Week Ending August 11, 2006

Work Completed To Date

The following activities have been completed to date:

- The FSP and QAPP have been competed and approved.
- Well permits from the LA County DHS have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23 and EW-1 have been completed.
- All wells have been developed. Development water disposed of.
- Dedicated bladder pumps installed in all wells except MW-13A, MW-17A and MW-19 (due to little to no water present).
- All groundwater monitoring wells sampled. Samples sent to E-Max for chemical analysis. Included in samples: 10 percent duplicates and QC samples.

Work Completed Last Week (Ending August 11, 2006)

Report generation in progress.

Work to Be Completed This Week (Ending August 18, 2006)

Level III QC data in progress. Survey data was revised for QC errors. Continued preparation of report

Planned Activities for Week Ending August 25, 2006

Continue report generation.

Issues to be Resolved

None to report.

Omega Chemical OU-2 Week Ending August 4, 2006

Work Completed To Date

The following activities have been completed to date:

- The FSP and OAPP have been competed and approved.
- Well permits from the LA County DHS have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23 and EW-1 have been completed.
- All wells have been developed. Development water disposed of.
- Dedicated bladder pumps installed in all wells except MW-13A, MW-17A and MW-19 (due to little to no water present).
- All groundwater monitoring wells sampled. Samples sent to E-Max for chemical analysis. Included in samples: 10 percent duplicates and QC samples.

Work Completed Last Week (Ending August 4, 2006)

Two of six sets of lab results received – being tabulated and reviewed. Report generation in progress.

Work to Be Completed This Week (Ending August 11, 2006)

Received remaining 4 sets of lab results and Level III QC data. Continue to review lab reports, tabulate lab data, evaluate lab QC. EPA Level III QC data being sent to Laboratory Data Consultants (LDC) for their review. Continued preparation of report

Planned Activities for Week Ending August 18, 2006

Continued preparation of report

Issues to be Resolved

None to report.

Omega Chemical OU-2 Week Ending July 28, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been completed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, and MW-22 have been completed.

Work Completed Last Week (Ending July 28, 2006)

Report generation in progress.

Work to Be Completed This Week (Ending August 4, 2006)

Two sets of analytical data (out of 6) received from E-Max. Review lab reports, tabulate lab data, evaluate lab QC. Continue preparation of report.

Planned Activities for Week Ending August 11, 2006

Continue preparation of report.

Issues to be Resolved

Developing revised schedule to reflect additional time necessary to complete work, as identified in report for week of July 14, 2006.

STATUS UPDATE Omega Chemical - OU2 July 21, 2006

Tasks Completed To Date

- The Field Sampling Plan and Quality Assurance Project Plan have been completed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22 and EW-1 have been completed and developed.
- Dedicated well pumps have been installed in the groundwater monitoring wells.
 Consistent with the criteria provided by EPA, pumps were not ordered for Monitoring Wells 13a, 17a or for 19. As previously detailed, these wells had less than five feet of water in the screened interval when measurements were taken prior to ordering the pumps. EPA was informed of, and approved this change.
- Well casing have been surveyed.
- Water level measurements have been collected.
- Field activities associated with groundwater monitoring have been completed.

Work Completed Last Week (Ending July 21, 2006)

Field activities associated with groundwater monitoring have been completed. Analytical results are pending.

Work to Be Completed This Week (Ending July 28, 2006)

None. Analytical results are pending.

Planned Activities for Week Ending August 4, 2006

Activities associated with the preparation of the Construction Completion Report will continue.

Issues to be Resolved

• Developing revised schedule to reflect additional time necessary to complete work, as identified in report for week of July 14, 2006.

Omega Chemical OU-2 Week Ending July 14, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been completed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22 and EW-1 have been completed and developed.
- Dedicated well pumps have been installed in the groundwater monitoring wells. Consistent with the criteria provided by EPA, pumps were not ordered for Monitoring Wells 13a, 17a or for 19. As previously detailed, these wells had less than five feet of water in the screened interval when measurements were taken prior to ordering the pumps. EPA was informed of, and approved this change.
- Well casing have been surveyed.
- Water level measurements have been collected.
- Field activities associated with groundwater monitoring have been completed.

Work Completed Last Week (Ending July 14, 2006)

Field activities associated with groundwater monitoring have been completed. Analytical results are pending.

Work to Be Completed This Week (Ending July 21, 2006)

Activities associated with the preparation of the Construction Completion Report continue.

Planned Activities for Week Ending July 28, 2006

Activities associated with the preparation of the Construction Completion Report will continue.

Issues to be Resolved

ARCADIS has been in contact with E-Max, the laboratory contracted to conduct the analysis of the groundwater samples currently being collected. E-Max has informed ARCADIS that the current turn-around time for reporting sample results is approximately four weeks. At the time the schedule was prepared, a one week turn-around was anticipated. The one week turn-around is consistent with laboratories utilized to date for the field screening sampling. The four week turn-around time coupled with the greater than anticipated time it has taken to conduct the groundwater sampling will have an impact on the overall project schedule. Although we will work to minimize impacts to the project schedule, it is currently anticipated that this delay will impact the overall project schedule by approximately three weeks.

Omega Chemical OU-2 Week Ending July 7, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been completed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22 and EW-1 have been completed and developed.
- Dedicated well pumps have been installed in the groundwater monitoring wells. Consistent with the criteria provided by EPA, pumps were not ordered for Monitoring Wells 13a, 17a or for 19. As previously detailed, these wells had less than five feet of water in the screened interval when measurements were taken prior to ordering the pumps. EPA was informed of, and approved this change.
- Well casing have been surveyed.
- Water level measurements have been collected

Work Completed Last Week (Ending July 7, 2006)

Additional well development activities were performed at MW-16B. During the gauging of the well, it was noted that some silt remained in the well. Therefore, additional development activities were performed and the well was re-gauged.

To assure that product warranty/guarantees associated with the dedicated bladder pumps would not be affected, groundwater monitoring activities were postponed until July 6, 2006 to allow for representatives from the well pump company (QED) to be present and provide instructional training to field staff regarding the proper operation of the equipment.

After initiation of the sampling activities it was found that due to the relatively slow recharge rates in several of the wells, the time to conduct the groundwater monitoring was significantly greater than originally anticipated. In an attempt to minimize potential schedule impacts, ARCADIS secured the use of a second set of groundwater sampling equipment so that sampling activities could be conducted at two nested well locations at the same time. Slow recharge rates in wells with pumps, especially noted in MW-12 and MW-16A, resulted in a protracted sampling schedule. The slow recharge rates in both MW-19 and MW-17A (wells without pumps) have also adversely impacted the schedule.

Work to Be Completed This Week (Ending July 14, 2006)

It is anticipated that the groundwater monitoring activities will be completed during the week ending July 14, 2006.

Field activities will be completed when all required groundwater samples have been collected.

Planned Activities for Week Ending July 21, 2006

No further field activities are anticipated.

Project-related activities will consist of report preparation tasks.

Issues to be Resolved

ARCADIS has been in contact with E-Max, the laboratory contracted to conduct the analysis of the groundwater samples currently being collected. E-Max had been selected for this phase of the project in order to meet EPA's QA/QC criteria. E-Max has informed ARCADIS that the current turn-around time for reporting sample results is approximately four weeks. At the time the schedule was prepared, a one week turn-around was anticipated. The one week turn-around is consistent with laboratories utilized to date for the field screening sampling. The four week turn-around time coupled with the greater than anticipated time it has taken to conduct the groundwater sampling will have an impact on the overall project schedule. Although we will work to minimize impacts to the project schedule, it is currently anticipated that this delay will impact the overall project schedule by approximately three to four weeks.

Omega Chemical OU-2 Week Ending June 30, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been completed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22 and EW-1 have been completed and developed.
- Dedicated well pumps have been installed in the groundwater monitoring wells.
 Consistent with the criteria provided by EPA, pumps were not ordered for Monitoring Wells 13a, 17a or for 19. As previously detailed, these wells had less than five feet of water in the screened interval when measurements were taken prior to ordering the pumps. EPA was informed of, and approved this change.
- Well casing have been surveyed.
- Water level measurements have been collected

Work Completed Last Week (Ending June 30, 2006)

Dedicated well pumps were installed in monitoring wells with at least five feet of water in the screened interval. Consistent with criteria provided by EPA, pumps were not ordered for Monitoring Wells 13a, 17a, or for 19. As previously detailed, these wells had less than five feet of water in the screened interval when measurements were taken prior to ordering the pumps. EPA was informed of, and approved, this change.

Work to Be Completed This Week (Ending July 7, 2006)

Groundwater monitoring will be initiated on Thursday, July 6, 2006. It is currently anticipated that the groundwater monitoring activities will be completed on or before July 11, 2006.

Planned Activities for Week Ending July 14, 2006

It is currently anticipated that groundwater monitoring activities will be completed on July 11, 2006.

Issues to be Resolved

Omega Chemical OU-2 Week Ending June 23, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been completed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, and MW-22 have been completed.
- Well casings have been surveyed.

Work Completed Last Week (Ending June 23, 2006)

Well development activities were completed

Water levels were measured in the groundwater monitoring wells.

Well casing surveying was completed. Survey data will be provided to EPA's consultant (CH2M Hill) upon receipt.

Work to Be Completed This Week (Ending June 30, 2006)

Dedicated well pumps will be installed in wells. Consistent with criteria provided by EPA, pumps were not ordered for Monitoring Wells 13a, 17a, or for 19. As previously detailed, these wells had less than five feet of water in the screened interval when measurements were taken prior to ordering the pumps. EPA was informed of, and approved, this change.

Groundwater monitoring activities that were planned for this week have been postponed due to scheduling issues.

Planned Activities for Week Ending July 7, 2006

Groundwater monitoring will be initiated on July 5, 2006 and monitoring is expected to be completed on July 6, 2006.

Issues to be Resolved

Omega Chemical OU-2 Week Ending June 16, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, and MW-22 have been completed.

Work Completed Last Week (Ending June 16, 2006)

Well development activities continued.

Work to Be Completed This Week (Ending June 23, 2006)

Surveying of the wells will be completed. Survey data will be provided to EPA's consultant (CH2M Hill) upon receipt.

Consistent with criteria provided by EPA, pumps were not ordered for Monitoring Wells 13a, 17a, or for 19. As previously detailed, these wells have less than five feet of water in the screened interval.

Water level measurements will be collected from the wells.

Scheduling conflicts with the well pump provider have caused a minor delay in the installation schedule. Pump installation is expected to take place early during week ending June 30, 2006.

Planned Activities for Week Ending June 30, 2006

Installation of well pumps will take place.

Groundwater monitoring will be initiated and is expected to be completed by June 30, 2006.

Issues to be Resolved

Omega Chemical OU-2 Week Ending June 9, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, and MW-22 have been completed.

Work Completed Last Week (Ending June 9, 2006)

Well development activities continued.

Work to Be Completed This Week (Ending June 16, 2006)

Well development activities will continue.

Well pumps will be ordered. Consistent with criteria provided by EPA, pumps will not be ordered for Monitoring Wells 13a, 17a, or for 19. These wells have less than five feet of water in the screened interval. Specifically, Monitoring Well 13a is currently dry, Monitoring Well 17a has a small amount of water in the sump, none in the screened interval, and Monitoring Well 19 has only a foot of water in the screened interval.

The newly installed wells will be surveyed. Surveying activities will be performed consistent with the procedures previously utilized for wells installed in 2005.

Planned Activities for Week Ending June 23, 2006

Well development activities will continue. Development work is currently planned for MW-12, MW-13b, and MW-17a. Due to the lack of water in the formation at the MW-17a location,

Weekly Status Report Week Ending June 9, 2006 Page 2 of 2

domestic drinking water may be utilized during well development, as approved by communications with EPA. Pursuant to EPA's instructions, the water will be analyzed prior to insertion into the well utilizing EPA Standard Method 8260B, and the volume of water added to the well and the amount removed will be recorded.

Issues to be Resolved

Omega Chemical OU-2 Week Ending June 2, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, and MW-22 have been completed.

Work Completed Last Week (Ending June 2, 2006)

Well development activities continued.

Work to Be Completed This Week (Ending June 9, 2006)

Well development activities will continue. Well pumps will be ordered.

Planned Activities for Week Ending June 16, 2006

Well development activities should be completed by June 16, 2006.

Issues to be Resolved

Omega Chemical OU-2 Week Ending May 26, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, and MW-22 have been completed.

Work Completed Last Week (Ending May 26, 2006)

Drilling at the MW-20 location was completed. Drilling at the EW-1 location was also completed during the week. Well development activities continued.

Work to Be Completed This Week (Ending June 2, 2006)

The following activities are expected to continue during week ending June 2, 2006:

• Well development activities will continue.

Planned Activities for Week Ending June 9, 2006

It is anticipated that well development activities may still be ongoing. In addition, ARCADIS will order bladder pumps for wells and arranging to have well casings surveyed.

Issues to be Resolved

Omega Chemical OU-2 Week Ending May 19, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-21, and MW-22 have been completed.

Work Completed Last Week (Ending May 19, 2006)

Drilling at the MW-20 location was initiated during the week. Due to a conflict in the driller's schedule, deployment of the drilling rig was delayed until May 17, 2006.

Well development activities were conducted as needed at various well locations.

Work to Be Completed This Week (Ending May 26 2006)

The following activities are expected to be completed by end of May 19, 2006:

- Completion of drilling of well MW-20 is expected.
- Initiation of drilling activities at EW-1 is expected.
- Well development activities will continue.

Planned Activities for Week Ending June 2, 2006

It is anticipated that the drilling activities associated with well EW-1 will be completed.

Issues to be Resolved

Omega Chemical OU-2 Week Ending May 19, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW-14, MW15, MW-16, MW-17, MW-18, MW-19, MW-21, and MW-22 have been completed.

Work Completed Last Week (Ending May 12, 2006)

Installation of well MW-14 was completed. The sonic drilling program is now complete. Screening sample results from MW-14 that have been received to date indicate PCE and TCE at levels lower than anticipated.

Work to Be Completed This Week (Ending May 19 2006)

The following activities are expected to be completed by end of May 19, 2006:

• Initiation of mud rotary drilling activities associated with MW-20 is expected to be initiated during the week. The drilling equipment is expected to be available on May 17. This is two days later than originally anticipated.

Planned Activities for Week Ending May 26, 2006

It is anticipated that the drilling activities associated with well MW-20 will continue throughout the week. Should activities be completed, work will be initiated at the EW-1 location.

Issues to be Resolved

Weekly Status Report Week Ending May 12, 2006 Page 2 of 2

Omega Chemical OU-2 Week Ending May 5, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW15, MW-16, MW-17, MW-18, MW-19, MW-21, and MW-22 have been completed.

Work Completed Last Week (Ending May 5, 2006)

Well MW-19 was installed. Work on the installation of MW-14 is ongoing and is expected to be completed by May 8, 2006. Preliminary screening sample results from PMW-19 did not show TCE or PCE at or above the detection limit, although low levels of other VOCs including 1,2,4-trimethylbenzene, bromodichloromethane, bromoform, dibromochloromethane, toluene, ethylbenzene, as well as m-, p-, and o-xylenes were detected. Screening sample preliminary results from MW-14 that have been received to date indicate PCE and TCE at levels lower than anticipated.

Work to Be Completed This Week (Ending May 12, 2006)

The following activities are expected to be completed by end of May 5, 2006:

• Completion of the drilling activities associated with MW-14 is expected during week ending May 12, 2006. roadway, moving the location back onto the hospital property is being proposed. The proposed location change will be discussed with EPA prior to implementation.

Planned Activities for Week Ending May 19, 2006

It is currently anticipated that the mud rotary drilling program will be initiated on May 15, 2006 at the proposed EW-1 location.

Issues to be Resolved

Omega Chemical OU-2 Week Ending April 28, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW 12, MW-13, MW15, MW-16, MW-17, MW-18, MW-21, and MW-22 have been completed.

Work Completed Last Week (Ending April 28, 2006)

Wells MW-22 and MW-21 have been installed. Screening sampling for VOCs performed during the well drilling activities showed concentrations of PCE between the method detection limit and the MCL.

Work to Be Completed This Week (Ending May 5, 2006)

The following activities are expected to be completed by end of May 5, 2006:

- Completion of the drilling activities associated with MW-19 is expected during week ending May 5, 2006.
- Mobilization and initiation of drilling activities associated with the PMW-14 location are expected to take place on Friday, May 5, 2006. The well location was originally located on hospital property near the intersection of Washington Blvd. and Lambert Road. The proposed well was then moved into Washington Blvd. Due mainly to the significant amount of utilities in the roadway and health & safety concerns with drilling in the busy roadway, moving the location back onto the hospital property is being proposed. The proposed location change will be discussed with EPA prior to implementation.

Planned Activities for Week Ending May 12, 2006

It is currently anticipated that well drilling at the PMW-14 location will be completed during week ending May 12.

Issues to be Resolved

PMW-14 Location

The current location for PMW-14 adjacent to Washington Boulevard presents some serious logistical concerns primarily associated with underground utilities and limitations on drilling times due to concerns relating to traffic congestion. The City of Santa Fe Springs has indicated that they will only allow drilling between 9:00 am and 3:00 pm and that all drilling equipment must be removed each work day. This will only allow for approximately three hours of drilling per day. OSVOG is currently reviewing options for nighttime work or drilling at an alternate location that will still meet with the project objectives. An alternative location in a parking lot of a hospital located at the corner of Washington Boulevard and Lambert is being proposed. Drilling is planned to be initiated at that location upon receipt of EPA's acceptance of the location change.

Note: EPA approved the alternate location in the parking lot of Presbyterian Intercommunity Hospital on May 4. Site clearance and drilling work will proceed as scheduled.

Omega Chemical OU-2 Week Ending April 28, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW23, MW16, MW18, MW17, MW13, MW12 and MW15 have been completed.

Work Completed Last Week (Ending April 21, 2006)

No field activities were performed during the week ending April 21, 2006. Work was performed to assure proper permits would be in place to allow for timely initiation of field activities. Although utility clearance activities were originally planned, administrative issues with the down-gradient municipality resulted in rescheduling of these activities to the following week. This rescheduling has had no effect on the overall project schedule as actual drilling was nonetheless able to occur as planned.

A discussion was held with EPA's consultant regarding the location of PMW-19. The location will be slightly altered to avoid future conflicts with the property owner's development plans. EPA's consultant agreed that the slight adjustment to the location was acceptable. The location will be within 100 feet of the previously marked location.

Work to Be Completed This Week (Ending April 28, 2006)

The following activities are expected to be completed by end of April 28, 2006:

• Mobilization and initiation of field activities associated with well drilling took place on April 24, 2006. Field activities were initiated at the PMW-22 location. Groundwater was first encountered at a depth of 66 feet. A summary of samples collected and the analytical results will be provided in the next weekly report. It is anticipated that the well drilling at this location will be completed on April 28, 2006 • Utility clearance activities will be conducted at the PMW-21 location on April 27, 2006. clearance at other planned drilling locations will follow.

Planned Activities for Week Ending May 5, 2006

It is currently anticipated that well drilling at the PMW-21 location will be initiated on May 1, 2006, and that the well should be completed by May 5, 2006.

Issues to be Resolved

PMW-14 Location

The current location for PMW-14 adjacent to Washington Boulevard presents some serious logistical concerns primarily associated with underground utilities and limitations on drilling times due to concerns relating to traffic congestion. The City of Santa Fe Springs has indicated that they will only allow drilling between 9:00 am and 3:00 pm and that all drilling equipment must be removed each work day. This will only allow for approximately three hours of drilling per day. OSVOG is currently reviewing options for nighttime work or drilling at an alternate location that will still meet with the project objectives.

Omega Chemical OU-2 Week Ending April 21, 2006

Work Completed To Date

The following activities have been completed to date:

- The Field Sampling Plan and Quality Assurance Project Plan have been competed and approved.
- Well permits from the Los Angeles County Department of Health Services have been obtained for all well locations.
- Access agreements / Excavation permits have been obtained from the Cities of Whittier and Santa Fe Springs.
- Dig Alert numbers have been obtained for all well locations, and are being updated as needed.
- Wells MW23, MW16, MW18, MW17, MW13, MW12 and MW15 have been completed.

Work Completed Last Week (Ending April 14, 2006)

No field activities were performed during the week ending April 14, 2006. Work was performed to assure proper permits would be in place to allow for timely initiation of field activities.

Work to Be Completed This Week (Ending April 21, 2006)

The following activities are expected to be completed by end of April 21, 2006:

- It is anticipated that necessary permits will be in place to allow for utility clearance work to be initiated. This work will include the use of an air knife to help locate potential underground utilities to a depth of approximately eight feet below grade.
- A slight delay was encountered when attempts were made to re-activate necessary permits at the City of Santa Fe Springs. The previously submitted permit package had been misplaced, and the individual who had addressed the permitting issues for the City had retired. The City is working with OSVOG to assure timely re-activation of permits.

Planned Activities for Week Ending April 28, 2006

It is currently anticipated that well drilling activities will be initiated on April 24 at the PMW-22 location. Upon completion of this location, drilling at PMW-21 will be initiated.

Issues to be Resolved

PMW-14 Location

The current location for PMW-14 adjacent to Washington Boulevard presents some serious logistical concerns primarily associated with underground utilities and limitations on drilling times due to concerns relating to traffic congestion. The City of Santa Fe Springs has indicated that they will only allow drilling between 9:00 am and 3:00 pm and that all drilling equipment must be removed each work day. This will only allow for approximately three hours of drilling per day. OSVOG is currently reviewing options for nighttime work or drilling at an alternate location that will still meet with the project objectives.

Other Items of Interest

PMW-19 Location

The property owner/tenant at the location adjacent to the planned installation site of PMW-19 has raised some objections to the planned work. To avoid potential issues with this party, OSVOG representatives approached EPA's contractor with a suggestion to move the well installation location by approximately 100 feet to the east. The new location of the well was reviewed with EPA's contractor on April 19, 2006 and it was agreed that the alternative location would be suitable for installation of the monitoring well.

ARCADIS

Appendix B

Permits

ARCADIS

Infrastructure, buildings, environment, communications

ARCADIS G&M, Inc. 1400 No. Harbor Boulevard

Suite 700 Fullerton

California 92835-4127 Tel 714.278.0992

Fax 714.278.0051

ENVIRONMENTAL

Action*

Transmittal Letter

To: **David Collos** City of Whittier 13230 Penn Street Whittier, CA 90602-1772 Copies: Project File

Date

Copies

Ron Halpern & W

Date:

July 11, 2005

ARCADIS Project No.:

Omega Chemical Operable Unit 2, Whittier, California, EPA Site ID#09BC, Docket No. 9-2004-004

Drawing No.

Rev.

CA000646.001.0010

Description

We are sending you: ☐ Under Separate Cover Via _____ the Following Items: ☐ Plans ☐ Shop Drawings ☐ Specifications ☐ Change Order ☐ Prints ☐ Samples □ Copy of Letter ☐ Reports Other:

1	7/7/05	Cit	y of Whittier E	xcavation/Construction Perm	nit No. 7977	
Action*	pproved	По	R Correct and	Resubmit	По	
_	approved As Noted	⊠F	File	Nesdomic	Resubmit	Copies Copies
	s Requested	□ F	A For Approva	al	Review and Comm	
	thod estal Service 1 st Class d/Registered Mail	☐ Courier/Hand D☐ United Postal S	-			
Comments	:					

7977	
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		/
TO:	APPLICANT	V

-100	SITE	
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FILE

CONTROLLERS

CITY OF WHITTIER

EXCAVATION/CONSTRUCTION PERMIT

(562) 464-3510

Name	Ron Halpern	Date July 7, 2005
Mailing Address	1400 N. Harbor Blvd., Ste. 700	Phone 714-278-0992 ext. 3052
City	Fullerton, CA 92835	
Job Address	12482 Putnam Street	Plan No.

Permission is hereby granted, pursuant to the Whittier Municipal Code, to excavate and/or construct in the City right-of-way as follows: Drill and install a groundwater monitoring well approved by City Council on 4/26/05 for the purposes of monitoring groundwater quality associated with the Omega Chemical site. Once installed (in the street), the well will be enclosed in a traffic-rated well box flush with the surface. Traffic control per W.A.T.C.H.

*Call UNDERGROUND SERVICE ALERT at 1-800-422-4133, two (2) working days BEFORE you dig.

riveways	\$ -	
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xcavation in Public Right-of -Way	\$ -	_
aterial storage in Public right-of-way	\$ -	-
emporary fencing in Public Right-of Way		
urb Drains		_
reet Cut		_
treet Closure	\$	_
prinkler system in parkway	_\$ -	
anopies	\$ -	_
der	\$ -	
enalty		
urry Seal Deposit: Account No.	\$ -	_
ther: No fee permit	\$ -	
	NO FEE	
job site during construction and until final inspection	n has been completed.	
August 12, 2005 By Da	avid Collosi	
NOTICE OF COMPLETION		
DATE: 7/7/05	NO.	7977
	urbs, gutters and/or monolithic curbs and gutters_xcavation in Public Right-of -Way	idewalks \$ - curbs, gutters and/or monolithic curbs and gutters \$ - curbs, gutters and/or monolithic curbs and gutters \$ - curbs, gutters and/or monolithic curbs and gutters \$ - curbs, gutters and/or monolithic curbs and gutters \$ - curbs, gutters are given by \$ - curb and gutters \$ - curbs are given by \$ - curb and gutters \$ - curbs are given by \$ - curb and gutters \$ - curbs are given by \$ - curb and gutters \$ - curbs are given by

Notice is hereby given that the work allowed by the permit number noted hereon has been completed in the manner provided in said permit and all obstructions, materials and debris have been removed.

CITY OF WHITTIER APPLICATION FOR PERMIT TO EXCAVATE/CONSTRUCT

NI EACE DUBLE OF TARE.		•
PLEASE PRINT OR TYPE: Name Row HALPE	2~	Date 6/27/05
Mailing Address 1400 N. Harbo		Phone (7/4) 278-0992 x 3052
City Fullecton	Zip 92835	
Job Address 12482 Putnam	st, whittee	Plan No.
hereby makes an application for permission	to make the following exception and	opproved by City Councilon 4/26/05
Drill and Install a grown	dwater maniferine can	What the aux pages of
men itacha ground Water	availty assertate & ac	it the amean Chamber Site
once installed (in the street	The sand Il will be enclosed	in a traffic-rated well box flush
with the surface, Traffic (onkal per WATCH	within days from the date of the permit issued
hereunder and shall be diligently and conti	nuously pursued to completion, and	that the excavation made under said permit shall be
refilled in the manner provided for in said	ordinance, and all construction materi	als and debris removed within 2/ days from date
upon which excavation is commenced or sa	id street, alley or public place is first	obstructed by said applicant, or that said excavation
expense of such applicant.	onstruction materials and debris may	be removed by the Public Works Department at the
oxpania or such apprount.	FEE SCHEDULE	
Residential Driveway Pen	mit/Inspection - \$194 each	
Commercial Driveway Per	mit/Inspection - \$479 each	
Sidewalk Pennit/Inspectio	n - \$123.00 plus \$.10 per	
	ess of 300 sq. ft.	***************************************
Curb, gutter and/or monol:	ithic curb and gutter - \$113.00	
plus \$.20 per lineal foot in	excess of 50 ft.	
Residential Excavation in	Public Right-of-Way - \$60.00	
Commercial Excavation in	Public Right-of-Way - \$146.00	
Material Storage in Public	Right-of-Way - \$127.00	
Temporary Fencing in Pub	lic Right-of-Way - \$119.00	
Curb Drain - \$85.00		
Street Cut Permit - \$119.00	0	
Street Closure - \$292.00		
Sprinkler System in Parkw	ay - \$79.00	
	5.00 + \$50.00 per week	
Rider: \$54.00	-	
Penalty: \$125.00 per item		
Slurry Seal Deposit: Acco		
of Other No-Fee pe	rmiti	
TOTAL		<u> </u>
		,
Office Use Only	This is only an application, NO1	
	No work shall be started prior to	permit approval.
Tentative Permit No. 7977		- 41/0 10.0010
Application received by:	Signed: (Constructor/Property O	
Field checked by:	Address 1400 N. Har	
Approved by: fullosi	City Fuller Jan, C.	
eneral Information	State #/City License <u>57/86</u> Phone No. <u>(7/4)</u> 278-099 8	
iched:///		· · · · · · · · · · · · · · · · · · ·
	Corporato: (120) 394-	3817 630 Plaza Or., Ste 200, Highlands Ranch, C 80129
THIS APPLICATION CANNOT BE PROCE	ESSED UNLESS BOTH SIDES OF TE	IIS SHEET ARE SIGNED BY THE APPLICANT.

CITY OF WHITTIER APPLICATION FOR PERMIT TO EXCAVATE/CONSTRUCT

All tree roots encountered during excavation shall be protected in place. Under no circumstances is permittee allowed to cut, trim, shave or break any portion of the tree roots without written approval from the City.

Damages (\$500 minimum) will be assessed for any person violating this provision.

I hereby acknowledge and agree to abide by all aforementioned provisions stated in the permit and waive my right to challenge said provisions. I hereby agree that I am solely responsible for any violation resulting from the acts or actions taken by my designees, not limited to, employees, partners and/or friends in any form or cause.

Applicant Signature:

IMPORTANT

APPLICANT MUST SIGN BOTH SIDES OF THIS APPLICATION

PERMIT PROVISIONS

- 1. All work shall be done in accordance with the Standard Specifications for Public Works Construction, latest edition and addendum, unless otherwise specified.
- 2. All traffic control shall be done in accordance with the Work Area Traffic Control Handbook, latest edition.
- 3. All work authorized under this permit must be completed within the time specified therein, and unless so completed, this permit shall be void. An extension may be granted if applied for 24 hours before this permit expires.
- 4. Provisions shall be made for barricades, lights and traffic control personnel to adequately protect the traveling public during construction and excavation operations. When necessary for public safety, traffic control personnel shall be on duty throughout the twenty-four (24) hours of each day. Two lanes of traffic shall remain open to the public at all times, one lane in each direction. Whenever it is necessary to direct traffic across the center of the street into oncoming traffic lanes, procedures outlined in the Work Area Traffic Control Handbook, latest edition, shall be followed and the approval of the Traffic Engineering is required.
- 5. City of Whittier, Public Works Department, shall be notified at least 24 hours before start of work by phoning (562) 464-3510. Should the City Inspector find working progress prior to notification by the Permittee, work may be stopped for a period of not less than the remainder of the working day.
- 6. A penalty will be charged for failure to apply for a permit prior to commencement of work.
- All work authorized under this permit must be diligently and continuously pursued so as to complete the work in as short a time as possible; and if not so pursued, this permit may be cancelled.
- 8. No debris or spoil shall be left in the street overnight.
- 9. All of the backfill within the area of the road bed shall be of aggregate base materials only (Section 220-2.1), and shall be thoroughly pneumatically tapped in layers not to exceed 4" in depth, except that trenches in excess of 30" below the bottom of the pavement may be compacted in 8" layers or other acceptable methods. Compaction test shall be taken by the permittee when and where required by the Inspector. Densities shall meet the requirements of Section 300-4.7 and 301-1.3 of Standard Specifications and of this permit.
- 10. When excavations are made in a parkway area which is landscaped, it shall be the contractor's responsibility to replace plants, shrubs and sod in a neat and workmanlike manner, leaving the area in as near its original state as possible, all to the satisfaction of the Street Maintenance Manager, Park Manager and/or Director of Public Works.
- 11. All concrete shall be cut to nearest score marks with a concrete saw in the depth of 2".
- 12. Repairs to Portland Cement Concrete shall be made of Portland Cement Concrete containing minimum 5.5 sacks of cement per cubic yard. Concrete pavement shall be constructed to a minimum thickness of 6", no less than the existing pavement and placed on a 4" base material. Portland Cement Concrete shall be satisfactorily cured, with Hunt's Process of equal and protected from disturbances for not less than 24 hours.
- 13. All asphalt concrete may be cut with a concrete saw to a minimum depth of 2". If a concrete saw is not used, the cut must be made neatly and uniformly by an acceptable method.
- Repairs to rock and oil or asphaltic concrete pavement shall be made with plant mix resurfacing, Type I. Patches shall be a minimum of 4" and not less than existing pavement plus 1" and placed on Type A base minimum 6" thick. All edges shall be treated with a tack coat. Base course shall be 34" the inspector shall determine mix and top course.

- 15. The holder of any permit and any agent, servant or employee working for the said permit holder on any excavation and fill, shall inform himself and obtain all necessary information as to the existence of and location of all underground pipes, lines, manholes, wires, substructures and appurtenances of any utility. The City shall be protected by the permittee against any damage by reason of any excavation on fill. Any damage caused to such underground installations, appurtenances, or substructures, shall be paid for by permittee. Such repairs as are required, shall be made or be caused to be made by the City of Whittier and billed to such permittee who shall pay the same upon receipt of a statement of the cost of such repair, replacement or reconstruction of the damaged substructures or appurtenances. In cutting curbs, if the curb is cracked from the top drain top of curb, the entire curb to the footing must be removed and replaced.
- 16. All utilities shall be placed with a minimum of 42" of cover, measured from the flow line of the gutter on the low side of the street.
- 17. All construction work between the curb line and property line shall be constructed in conformance to Standard Plans and Specifications approved the City of Whittier Ordinance No. 1901.
- 18. Form inspection will be required prior to placement of concrete and at the completion of work. At least 24 hours notice will be required before inspection can be provided. Call (562) 464-3510.
- 19. Curbs shall be core drilled or a minimum of two (2) feet of curb removed (saw-cut required). Two (2) number 3 reinforcing bars shall be placed of the top of the pipe drain.
- 20. Specific provisions and conditions may be appended to each permit.
- 21. This permit does not allow work on private property.
- 22. Insurance requirements are as specified by the Director of Public Works.
- 23. Permittee shall comply with the Waste Discharge Requirements of the National Pollutant Discharge Elimination System (NPDES) Permit for Municipal Storm Water and Urban Runoff Discharges in the County of Los Angeles (Order No. 01-182, NPDES Permit No. CAS004001). Best Management Practice (BMP) shall be used to prevent storm water pollution. A copy of said NPDES permit and BMP(s) is available to interested parties upon request at the Public Works Department, 13230 Penn Street, Whittier, California.

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JOB	SITE

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CONTROLLERS

CITY OF WHITTIER

EXCAVATION/CONSTRUCTION PERMIT (562) 464-3510

		(00)	
Name	Ron Halpern	Date July 7, 2005	
Mailing Address	1400 N. Harbor Blvd., Ste. 700	Phone 714-278-0992 ext. 3052	
City	Fullerton, CA 92835		
Job Address .	12482 Putnam Street	Plan No.	

Permission is hereby granted, pursuant to the Whittier Municipal Code, to excavate and/or construct in the City right-of-way as follows: Drill and install a groundwater monitoring well approved by City Council on 4/26/05 for the purposes of monitoring groundwater quality associated with the Omega Chemical site. Once installed (in the street), the well will be enclosed in a traffic-rated well box flush with the surface. Traffic control per W.A.T.C.H.

*Call UNDERGROUND SERVICE ALERT at 1-800-422-4133, two (2) working days BEFORE you dig.

		PERMIT FEES		
		Driveways	\$ -	_
		Sidewalks	\$ -	_
	<u> </u>	Curbs, gutters and/or monolithic curbs and gutters	<u>\$</u> -	_
		Excavation in Public Right-of -Way	<u> </u>	_
		Material storage in Public right-of-way	_\$	_
		Temporary fencing in Public Right-of Way	\$ -	_
		Curb Drains	\$ -	_
		Street Cut	<u> </u>	_
		Street Closure	<u>\$ -</u>	_
		Sprinkler system in parkway	\$ -	_
		Canopies	\$ -	_
		Rìder	<u>\$</u>	_
		Penalty	\$ -	<u></u>
		Slurry Seal Deposit: Account No.	<u> </u>	_
	X	Other: No fee permit	_\$ -	_
	TOTAL		NO FEE	
A copy of this per	rmit must be kept	on the job site during construction and until final inspection ha	is been completed.	
This permit expire	es on	August 12, 2005 By David	Collosi	
		NOTICE OF COMPLETION		
Return to: Director of Public V City of Whittier 13230 Penn Street Whittier, CA 90602	t	DATE: 7/7/05	NO.	7977
Notice is becal.	airon that the w	ark allowed by the normit number noted become has been com	plotod in the mann	or provided

Notice is hereby given that the work allowed by the permit number noted hereon has been completed in the manner provided in said permit and all obstructions, materials and debris have been removed.

CITY OF WHITTIER APPLICATION FOR PERMIT TO EXCAVATE/CONSTRUCT

PLEASE PRINT OR TYPE:		•	
Name Row HALPE	22	Date 6/27/05	
Mailing Address 1400 N. Harbo		Phone (7/4) 278-0992 x 3	052
City Fullecton	Zip 12835		
Job Address 12482 Putnam	st, whittee	Plan No.	
hereby makes an application for permission	to make the following excavation under	approved by City Coursi on 4/2 the provisions of City ordinance to with	26/05
Drill and Install a grown	dwater monitoring we	Prfor the purposes of	
mon Horing groundwater	grality associated wi	to the omega Chemical Site -	-
with the surface. Traffic	Contral Der WATCH	in a traffic-rated well box gluch	•
This applicant hereby agrees that the above	-described work shall be commenced w	within days from the date of the permit issued	j
hereunder and shall be diligently and conti	invously pursued to completion, and the	rat the excavation made under said nermit shall be	2
upon which excavation is commenced or sa	orumance, and an construction material aid street, alley or public place is first o	ls and debris removed within 2/ days from date obstructed by said applicant, or that said excavation)
may be refilled in such manner, and any co	onstruction materials and debris may b	e removed by the Public Works Department at the	5
expense of such applicant.	FEE_SCHEDULE	•	
Recidential Universal Dev	mit/Inspection - \$194 each		
	mit/Inspection - \$479 each		
Sidewalk Permit/Inspectio	·		
	ess of 300 sq. ft		
	ithic curb and gutter - \$113,00		
	excess of 50 ft.		
	Public Right-of-Way - \$60.00		
	Public Right-of-Way - \$146.00		
	Right-of-Way - \$127.00		
	olic Right-of-Way - \$119.00	——————————————————————————————————————	
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	ay - \$79.00		
	25.00 + \$50.00 per week		
Penalty: \$125.00 per item			
Slurry Seal Deposit: Acco			
Other: No -Fee pe	cmiti	<u></u>	
TOTAL		<u> </u>	
TOTAL		<u> </u>	
	This is only an application, NOT.	A PERMIT.	
Office Use Only	No work shall be started prior to p		
Tentative Permit No. 7977			
Application received by:	Signed: (Constructor/Property Ov	vner Englithen - ARCO	210
Field checked by:	Address 1400 N. Hark		
Approved by: Aut Collos;	City Fullerton, CB		
General Information	State #/City License 57/86		
Attached: No	Phone No. (114) 278-099 Z		
	Corporato (720) 344-3	3817 630 Plaza Dr., 5te 200, Highlands &	anch, C
THIS APPLICATION CANNOT BE PROCE			10129

CITY OF WHITTIER APPLICATION FOR PERMIT TO EXCAVATE/CONSTRUCT

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Damages (\$500 minimum) will be assessed for any person violating this provision.

I hereby acknowledge and agree to abide by all aforementioned provisions stated in the permit and waive my right to challenge said provisions. I hereby agree that I am solely responsible for any violation resulting from the acts or actions taken by my designees, not limited to, employees, partners and/or friends in any form or cause.

Applicant Signature:

IMPORTANT

APPLICANT MUST SIGN BOTH SIDES OF THIS APPLICATION

PERMIT PROVISIONS

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- 21. This permit does not allow work on private property.
- 22. Insurance requirements are as specified by the Director of Public Works.
- 23. Permittee shall comply with the Waste Discharge Requirements of the National Pollutant Discharge Elimination System (NPDES) Permit for Municipal Storm Water and Urban Runoff Discharges in the County of Los Angeles (Order No. 01-182, NPDES Permit No. CAS004001). Best Management Practice (BMP) shall be used to prevent storm water pollution. A copy of said NPDES permit and BMP(s) is available to interested parties upon request at the Public Works Department, 13230 Penn Street, Whittier, California.

CITY OF WHITTIER APPLICATION FOR PERMIT TO EXCAVATE/CONSTRUCT

LEASE PRINT OR TYPE: ame ROWALD HALL	DE P	Date 4/13/2006
	BORBLUD #700	Phone (7/4) 278-0992 (0)
City FULLERTON	Zíp 92835	(944) 294-1532 (-
ob Address 12300 WASHWET	on BIND, Unit F	Plan No.
Dri Pot hole doilly	to make the following excavation under the	nitorine well
in front of Minitary	groundwite associated	with the Omega Chevarial
sto well to be ence	used in traffix-ruled to	1211 box Slush with Suffect.
ereunder and shall be diligently and cont efilled in the manner provided for in said pon which excavation is commenced or sa	e-described work shall be commenced with inuously pursued to completion, and that ordinance, and all construction materials a aid street, alley or public place is first obs- construction materials and debris may be a	the excavation made under said permit issued the excavation made under said permit shall be and debris removed within <u>loo</u> days from date structed by said applicant, or that said excavation removed by the Public Works Department at the
	FEE SCHEDULE	•
	mit/Inspection - \$194 each	
Commercial Driveway Pe	ermit/Inspection - \$479 each	
	on - \$123.00 plus \$.10 per	
	cess of 300 sq. ft	
	lithic curb and gutter - \$113.00	
	n excess of 50 ft	
	Public Right-of-Way - \$60.00	
	n Public Right-of-Way - \$146.00	
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	blic Right-of-Way - \$119.00	
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	way - \$79.00	
	25.00 + \$50.00 per week	-
Rider: \$54.00		
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Slurry Seal Deposit: Acc	ount No.	
	, attanente en en en en en en en en en en en en en	
TOTAL	,	
Office Use Only	This is only an application, NOT A No work shall be started prior to pe	
entative Permit No. <u>8305</u>		
pplication received by:	Signed: (Constructor/Property Own	· 10
ield checked by:	Address 1400 of Harbar	
pproved by: Atalles	City Fullerton	
eral Information	State #/City License 57186	
tached:	Phone No. (714) 278-09	352
	(Osporati (720) 344.	3817 @ 630 Plaga Dr. Ste 20

CITY OF GANTA FE SPRINGS 05-09-05 #

SC. IAL 804.00 CHECK 762.00 CHECK 42.00

Application for Excavation Permit

City of Santa Fe Springs Department of Public Works - Engineering

CONTRACTOR SECURE SECTION OF SECURIOR SECTION OF SECTIO Please print in Blue or Black ink only ITEM 1CL 8497 03:27 Phone: 714-278 Starting Date: City Business Licensé No.: ARC A -014000 706

Completion Date:

CA State License No.:

THE ABOVE NAMED HEREBY MAKES APPLICATION FOR PERMISSION TO EXCAVATE IN THE PUBLIC HIGHWAY SUBJECT TO THE PROVISIONS REQUIRED BY SECTION 19 OF THE SANTA FE SPRINGS MUNICIPAL CODE AND ANY SPECIFIED REQUIREMENTS ATTACHED HERETO.

IN CONSIDERATION OF THE GRANTING OF THE PERMIT. IT IS AGREED BY THE APPLICANT THAT THE CITY OF SANTA FE SPRINGS AND ANY OFFICIAL OR EMPLOYEE THEREOF SHALL BE SAVED HARMLESS BY THE APPLICANT FROM ANY LIABILITY OR RESPONSIBILITY OCCURRING AS THE PROXIMATE RESULT OF ANY WORK UNDERTAKEN UNDER THE TERMS OF THIS APPLICATION AND THE PERMIT OR PERMITS WHICH MAY BE GRANTED IN RESPONSE THERETO, AND THAT ALL SAID LIABILITIES ARE HEREBY ASSUMED BY THE APPLICANT. IT IS FURTHER AGREED THAT IF ANY TANK, PIPE, CONDUIT, DUCT OR TUNNEL PLACED IN THE EXCAVATION OR OBSTRUCTION FOR WHICH THIS PERMIT IS ISSUED INTERFERES WITH THE FUTURE USE OF THE HIGHWAY BY THE GENERAL PUBLIC, THEN THE APPLICANT AND HIS SUCCESSORS OR ASSIGNS WILL AT HIS OWN EXPENSE REMOVE SUCH TANK, PIPE, CONDUIT, DUCT, OR TUNNEL, OR RELOCATE AT A LOCATION DESIGNATED BY THE DIRECTOR OF PUBLIC WORKS OF THE CITY OF SANTA FE SPRINGS.

 $7 \times 95 = 76$

ATTY UNDERSTOUND SERVES ALER7 (USA) 2 DAYS PRIOR TO STARTING WORK

1.000/4224113

WORK IS REQUIRED

City of Santa Fe Springs Department of Public Works, Engineering Division Use Only

☐ Checklist Complete

Printed:

05-09-05 1CL8497 05-09-05 1CL8497

CHECK 762.00 CHECK 42.00



infrastructure, buildings, environment, communications 630 Plaza Dilve, Suile 200 • Highlands Ranch, Colorado 801 29 Tel 720/344-3500 • Fax 720/344-3535

ITEM DESCRIPTION	VENDOR NO	VOUCHER NO	AMOUNT	PROJECT	ACCOUNT
Excavation Permit Fee	030714		\$42.00	CA0646.001 06	
,					
	:				

ARCADIS

infrastructure, buildings, environment, communications 630 Plaza Drive, Suite 200 • Highlands Ranch, Colorado 80129 Tel 720/344-3500 • Fax 720/344-3535

TION VENDOR NO VOUCHER NO		44404.00			
		AMOUNT	PROJECT	ACCOUNT	
	030715	\$762.00	CA0646.001		
		030715	030715 \$762.00	030715 \$762.00 CA0646.001 .06	

OILL OF JANIA FE SPRINGS BUSINESS LICENSE

The person, firm or corporation below named is hereby granted this license for the purpose of engaging in, carrying on or conducting, in the City of Santa Fe Springs, California, the business, trade, calling, profession, exhibition or occupation described in the application for this license; for the period indicated, as provided by Municipal Code, Section 35.073.

Susan Bergeron-Vance, Director of Finance and Administrative Services

630 PLAZA DR SUITE 200, HIGHLANDS RANCH CO 80129

BUSINESS ADDRESS IF DIFFERENT FROM MAILING ADDRESS

MAILING ADDRESS

ARCADIS G & M INC 1400 N HARBOR BLVD, SUITE 700 FULLERTON CA 92835 MAY 31 2006
LICENSE NUMBER

ARCA-014000700
BUSINESS TELEPHONE

714 278 0992
FEDERAL I.D. # 957-0373224

DISPLAY THIS COPY

STEP 1 TAX COMPUTATION (See reverse side of this form for definitions and explanations)

TAX CODE 07 GENERAL CONTRACTOR

LICENSE TAX	\$150.00
Processing	
	total: \$180.00
LIC#571846 TYPE:A HAZ EXP:03-31-2007	
	A CHARACTER AND A MARKET AND A CHARACTER AND A CHARACTER AND A CHARACTER AND A CHARACTER AND A CHARACTER AND A
Per	nalty:

CITY INFORMATION

City	Hall	
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11710 E. Telegraph Road • 868-0511 • FAX 868-7112 • www.santafesprings.org

Hours: M - F, 7:30 a.m. to 5:30 p.m. (Closed every other Friday)

Business Licenses	Ext. 7527
Building	
Child Care Services	
City Council	
City Manager	
Community Services Administrative Offices	Ext. 7570
Engineering	Ext. 7540
Finance & Administrative Services	Ext. 7520
Planning and Development	Ext. 7550
Transportation	Ext. 7572
water Billing	⊏XL. / 333
Zoning	Ext. 7550

Fire Department Headquarters

11300 Greenstone Avenue • 944-9713 • FAX 941-1817 • e-mail: fire@santafesprings.org

Hours: M - F, 7:00 a.m. to 6:00 p.m.

Library Services

11700 E. Telegraph Road • 868-7738 • FAX 929-3680 • e-mail: library@santafesprings.org
Hours: M - Th, 10:00 a.m. to 9:00 p.m., Fri. 10:00 a.m, to 6:00 p.m., Sat. 10:00 a.m, to 5:00 p.m.

Police Services

11576 Telegraph Road • 409-1850 • FAX 409-1854 • e-mail: policeservices@santafesprings.org Hours: M - Fri, 8:00 a.m. to 11:00 p.m., Sat & Sun 10 a.m. to 5 p.m. • 24-Hour Telephone Access

12636 Emmens Way • 868-0511 • FAX 946-9165 • e-mail: publicworks@santafesprings.org Hours: M - F, 7:30 a.m. to 5:30 p.m.

Recreation Services

11740 E. Telegraph Road • 863-4896 • FAX 863-4231 • e-mail: recreation@santafesprings.org Hours: M - Th, 9:00 a.m. to 9:00 p.m., Fri. 9:00 a.m. to 5:00 p.m.

Family & Human Services

9255 Pioneer Boulevard • 692-0261 • FAX 695-8620 • e-mail: familyandhumanservices@santafesprings.org Hours: M - F, 8:00 a.m. to 6:00 p.m.

05-09-05 1018501

SURTI 1

480.00

SERVICE APPLICATION REQUEST AND FEE COLLECTION COUNTY OF LOS ANGELES – DEPARTMENT OF HEALTH SERVICES' PUBLIC HEALTH PROGRAMS – ENVIRONMENTAL HEALTH

Sulmitos

SERVICE REQUEST APPLICATION

INS T	rRI	ICT	IO	NS
			\cdot	

	1.	Make the mor	ney ord	SERVICE requested and er or check payable to LO on is nontransferable.				
	FEE F	REQUIRED*		TYPE OF SERVICE				
3 X	176 =	2288-	X	MONITORING WELL CO a Non-Production Well -Well		OMMISSIONING	Complete and attach	
				WELL CONSTRUCTION, Complete and attach a Produc	, RENOVATION OR I		NG PERMIT	
				PRIVATE SEWAGE DISF			MIT	
				PRIVATE SEWAGE DISP				
				INSPECTION OF MOUN			d States Forest Service	
	·			SEPTIC TANK REPLACE				
				INSPECTION OF EXISTI		GE SYSTEM		
				WATER SUPPLY TEST A Agriculture			S. Department of	
	* Refer 2. 3.	Check with the	Contact	the current fiscal year. Field t Office stamped below for reapplication, money order or of	equirements or informa	ation		
		5050 Comme	d Rura erce Dri	les l Program / Water, Sewa ive, Baldwin Park, CA 91 K (626) 813-3016	•	?rogram		
	4.	Please contact	t office	noted above or office indic	cated below, after yo	u have received yo	our receipt, to	
	omeg	an inspection a Chemical	Supe	Sund Site	: " W	•	l Locations table	e atte
	Service/ Jo	able Uni' + # b Location Address		Sandle Fe Sornas	Zip Assessor Ma	ap Book Page Parc	cel # Date	
		9 e/o Christ	lopher	Lichens 25 Hawthe	unest Mailston	p SFD-7-4 Sp	in Francisco, CA	9410
	Owner / A	pplicant Name		Address/Zip		(41	s) 972-3/49	•
	ARCA	DIS		1400 N. Harbor Bl Address/Zip	lad, Ste 700 Fi	illeston (A 92)	835 (714)278-6	1992
	Contractor			Address/Zip		-11000017(0)	Phone No. × 3	052
				Tract no. L ge Disposal System Construction or Re		rooms Fixtu	re Unit Count	
Γ		CC	ONTACT O	FFICE		DEPARTMENT STAMP		7
				J.				

FEE FOR SERVICES EFFECTIVE OCTOBER 3, 2003

\$176.00	-	MONITORING WELL CONSTRUCTION/DESTRUCTION (Including cone pentrometer or hydropunch for ground water sampling)
\$288.00	-	WELL CONSTRUCTION, RENOVATION OR DESTRUCTION PERMIT (I.e., municipal, domestic, irrigation, industrial, cathodic, ground water injection)
\$692.00	-	PRIVATE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT
\$635.00		PRIVATE SEWAGE DISPOSAL SYSTEM RENOVATION/EXPANSION
\$322.00		TANK REPLACEMENT
\$50.50/hr	-	INSPECTION OF MOUNTAIN CABIN SITE
\$322.00	-	INSPECTION OF EXISTING PRIVATE SEWAGE SYSTEM
\$176.00	-	WATER SUPPLY TEST AND CERTIFICATION
	-	· .

As of July 1, 1995 no permits will be required for Soil Borings inadvertently going to ground water as long as they are not intended to sample ground water. No permit will be required for Vapor Extraction or Bio Vent Wells of extending into ground water. Since a permit is not required, there will not be any fees due for these projects. Fermits are now required from the Health Department for groundwater injection wells.

WATI	LL PERMIT APP ER & SEWAGE / MOU COMMERCE DRIVE,	INTAIN & RURA	- NON L PROGRAMS - ENVIR K, CA 91706 (626) 430-53	N-PRODUC ONMENTAL I 380 FAX (626)	HEALTH DIV		D	ATE: 1/3/0	5	
	V NEW WELL CONSTRUCTION FULL RECONSTRUCTION OR RENOVATION DECOMMISSIONING OTHER: EXTERNATION OTHER: VEXT					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		EAT EXCHANGE THER (Specify):		
£	SITE ADDRESS DA	Burkerst.	, east of Somman	Chear	la Fc Spr 12012	ings Busto	5+)	zi≱ cod	E 90670	
	Township		Range		Section			Map Book Page/ Gr	id 2	
	NO. OF WELLS IN	BACH PARCEL	:	At	track site map	with well	locations Lat.	33,961967	/Lovy 118.0603	
	Type and Size of Production Casing		SCH 40		Company		BRCAD			
	Senitary / Annular Sealing Material	95% conver	t, 5% bentonite oclone water tuble	Slurry	Contact For	POL	Ronald H		11 Ste 700	
	Depth of Sanitary / Annular Scal	0 - 55			City , State :	Zip	Fullerton	, CA 9283	2	
	Conductor Casing	N/A	1 V		Telephone	· · · · · ·	(7/4)2	78-0992 x	3052	
	Seal		A	1.2.2	FOUND TO	DIFFER I	OGIC CONDITIONS FROM THE SCOP	e of work prese	IN THE FIELD ARE NTED TO THIS OFFICE,	
	Well Owner Address		o Christopher Lic ne St. Mail Stop		WORK IL				I Inn Only)	
	City / Zip Code (19405 94		DISPOSITION OF PERMIT (Department Use Only) THIS PERMIT IS CONSIDERED COMPLETE WEEN THE WORK PLAN IS APPROVED AND WHEN THE WELL COMPLETION LOG IS RECEIVED. NO WELL CONSTRUCTION OR DECOMMISSIONING CAN BE INITIATED WITHOUT THE WORK PLAN APPROVAL FROM THIS DEPARTMENT.					
	Telephone	(415) 972								
	Well Driller	1	elopment Corpora	tion						
	Address	5566 Ar			Date 3 B D5 RPHS					
	City / Zip Cade	Montdair	/91783		 	000	-			
	C-57 License No.	28 332	4 <u>6</u> 131 – 4014		Conditions					
25322 15022	Telophone	[4047]	151 - 1-11							
	Well Depth log / records					л	4.90			
	Method of Well Assessment									
	Depth and Number of Perforations					****			····	
2	Type of Perfections Size of Perfections									
	Type and Amount of Scalant					,				
	Method of Upper Scal Pressure Application									
I he	reby agree to comply	in every respect v	vith s0 the regulations of	f the		774				
Cou	anty Environmental H County of Los Angele	ealth Division and said and the State of	d with all ordinances and California pertaining to	d laws of well						
wel	l and within thirty day	ys thereafter, I wi	sionist. Upon completion It fornish the Environme	ental					\$0.780.20	
Wel	I, perforations in the c	asing, and any of	vell giving dote drilled, d her data deemed necessa	ry by	Date		REHS			
	unity Environmental H	_	2	Ì						
1	fond	Applicant	pasture							
Ap; Tek	pikenst Name: (PRINT)	Ponald Ho	1 pacture 1/pacm 0992 ex 305	2	Dete		REHS			

en [.]	t B	y: ADMINISTRA	TION;	62	26 813 30	16;	8 M	lar'05	9:17;		7;Page 13/13 アM\レ	
٠,	MAT		UNTAIN & RURA	L PROGRAMS - ENVIR K, CA 91706 (626) 430-5	CONMENTAL				DATE:	2/3/05	·	
RECONSTRUCTION OR RENOVATION DECOMMISSIONING				CAT	NITORING THODIC ECTION TRACTION				XCHANGE (Specify):			
	SITE ADDRESS CT				cny Whi	Hier				ZIF CODE	90602.	
		Township		Range		Section			***	ook Page/ Grid	Thomas suede	
		NO. OF WELLS IN	BACH PARCEL	. 1	. A	ttach site map wit	Haw d	locations	Lat. 33.	4204/	mg, -118.0468	41
		Type and Size of Production Caping	4" dia . S	ich 40 pvc		Сокорналу			dis G			
		Senitary / Annular Scaling Meterial	95% cen	nent, 5% bent	onite,	Contact Person Address			Halpers		, ste 700	
		Depth of Sanitary /	0-65	ellots if below w	mile! Inimp	City , State Zip				A 9283		
		Annular Scal Conductor Casing	 -			Telephone		(714)	278 -	0992 x	3052	
E	F.2. C-99	Scal	N W								THE FIELD ARE	
		Well Owner		10 Christophor		WORK PLAN N						
		Address		ne St. Mail Stop SF	D-7-4	THE DESIGNATION				Department Un		
		City / Zip Code		sco / 94105		THIS PERMIT IS CONSIDERED COMPLETE WHEN THE WORK FLAN IS APPROVED AND WHEN THE WELL COMPLETION LOG IS RECEIVED. NO WI CONSTRUCTION OR DECOMMISSIONING CAN BE INITIATED WITHOUT THE				RECEIVED. NO WEL	L	
		Telephone	(415)972			WORK PLAN A					ED WITHOUT THE	
	i K	Well Driller	T	dopment corpore	mon	:						
		Address Code	5566 Arr			Date 3 13 1	e					
		City / Zip Code C-57 License No.	Montclair 283326	/ 41495		Conditions		$\stackrel{\cdot}{\leftarrow}$				
)	8.17. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Telephone	(909) 93	1 - 4014		Conditions			<u></u>	······································		-
			<u> </u>									
	ं डा ', -,	Well Depth log / records		· · · · · · · · · · · · · · · · · · ·			-					****
		Method of Well Assessment	··· · · · · · · · · · · · · · · · · ·									_
		Depth and Number of Perforations										_
	1	Type of Perforator Size of Perforations										\dashv
a de la constante de la consta		Type and Amount of Scalant	1									
		Method of Upper Seal Pressure Application										-
				ith all the regulations of					<u></u>			
	the (County of Los Angeles	and the State of 6	with all ordinances and California pertaining to dealer there remaints	well							
	well	and within thirty days	thereafter, I will	sioning. Upon completion for sish the Environment of school date dutted the	ntal		T,					
	Health affice with a completion log of the well giving date drilled, depth of the well, perforations in the casing, and any other data deemed necessary by County Environmental Health Division.					Date	1	RIBH9				

REHS

Date

Job 957; Page 5/13

BMIV13

WAT	COMMERCE DRIVE	UNTAIN & RURA BALDWIN PAR	- NO IL PROGRAMS - ENVI K. CA 91706 (626) 430- FMW 131, B	RONMENTAL 5380 FAX (626	813-3016	DATE	7 7 7	
	NEW WELL CO RECONSTRUCT DECOMMISSIO OTHER:	tion or renov		CAT	NITORING MODIC ECTION RACTION		`EXCHANGE CR (Specify) :	
	SITE ADDRESS 12	460 Autna	un St	crr W	nittier		zip code <i>906</i>	ł
Times	Township	!	Range		Section	May 4-1	Book Page Grid LA 76	7
2.4	NO. OF WELLS IN	EACH PARCEL	1 (Chrotze West	(H) A	ttach site map with we	l tocations Lat 33	1.969711 /song	11804028
	Type and Size of Production Coting	2-Inchel	um SCH 80 F	rc	Company	AR CADIS		
	Senioury / Annulus Seniong Material	1	nt 5% Ben		Contact Person Address	Ronald Ha	larbor Blud s	k 700
	Depth of Sanktury i	1			City . State Zip	Fullerton	CA 92835	
•	Annular Seal Conductor Casing	0-03	0-110		Telephone	(7/4)278	-0992 x 305	
	Seal Owner	MEGGAR	am gel che	Lake	POUND TO DIFFEE		INCOUNTERED IN THE P WORK PRESENTED TO INCUMENT	
	Address	75 Hanks	enst delstras	hen 5 50-7-9				
7	City / Zip Code	1	10,00 94105		THIS PERMIT IS CO	NEEDERAB COMPLET	it (Department Uni Only) IL When the Work Pla Pletion log 18 receiv	
1	Tolephone	(415) 17				OYAL PROM THIS DE		HOUT THE
	Well Driller		rekepment a	5 900		Burney to constitute the		
	Address		con Hary		Du 3 12 00	REUS	constant of the second of the	
	City / Zip Code		air, CA 9/7	163	3/2/02	KETE	———	
	C-57 Lipeose No.	28332			Conditions			
Sales Sales	Thisphone	(707)73	1-4014		ļ 			
	Well Depth log / records							
	Method of Well						······································	
A STATE	Dopth and Number of Performions							12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Type of Perforations Size of Perforations							2 V
	Type and Amount of Sedant						,	
	Method of Upper Saal Pressure Application							
Constitution of the last constitution of the l	my Environmental Hi County of Los Angeles truction, reconstruction and within thirty day the office with a comp perforations in the con- pay Environmental Hi	entith Division and a and the State of 6 nn and decommiss as thereafter, I will letten log of the westing, and any othership by his and any othership and an	ith all the regulations of with all ordinances and California pertaining to devine. Upon completic farmish the Environment giving date a rilled, doer data demned necram	i inwa of well m of the mtal lepth of the	Date	REPS		
Tolog		214 1278-	8992 x 3052			 		

MARCÉ-A E-53 (Rus. 01/2004)

WA		PLICATION - NON UNTAIN & RURAL PROGRAMS - ENVIRO , BALDWIN PARK, CA 91706 (626) 430-53	ONMENTAL		DATE: 2/3/05			
	NEW WELL CO	WELL CONSTRUCTION PMW 14 ONSTRUCTION OR RENOVATION OMMISSIONING ER: EXT			HEAT EXCHANGE OTHER (Specify):			
		Washington Blud, doesn't of intersection with lambert	aty - kd.	Whitier	ZIP CODE 90606			
	Township	Range		Section	Man Book Page/ Grid P. 707 B-)			
	no. Of Wells in	BACH PARCEL:	A	trach site map with well	ماسن کے صمیت میں ا			
	Type and Size of Froduction Casing	4 juch dia. SCH4D PI	M	Company	Arcadis G & M			
	Senitary / Anguinr Seniing Material	195% named 5% benton	K	Contact Person	Ran Halpern 1400 N. Harbor Blyd., Ste 700			
	Dopth of Sanitary /	sturry; pellets if below wal	(2) 101000	City , State Zip	Fullerton, CA 92835			
, i	Annular Seal Conductor Casing	0-45 A		Tolephone	(714) 278 - 0992 2 3052			
	Seed	N/A			OGIC CONDITIONS ENCOUNTERED IN THE FIELD ARE FROM THE SCOPE OF WORK PRESENTED TO THIS OFFICE,			
	Well Owner	U.S. EPA c/o Christophor U			FICATIONS MAY HE REQUIRED			
	Address	35 Hawthorne St. Mail Step SFD San Francisco / 94105	-1-4	DISPOSITION OF PERMIT (Department Use Only) THIS PERMIT IS CONSIDERED COMPLETE WHEN THE WORK PLAN IS APPROVED AND WHEN THE WELL COMPLETION LOG IS RECEIVED, NO WELL CONSTRUCTION OR DECOMMISSIONING CAN BE INTELLED WITHOUT THE WORK PLAN APPROVAL FROM THIS DEPARTMENT.				
	City / Zip Code Tolephone	(415)972-3149						
	Well Driller	Water Dovelopment Corporal	rion	WORK PLAN APPRO	VAL FROM THIS DEPARTMENT.			
	Address	5566 Arrow Hwy						
	City / Zip Code	Montchair / 91763		Date 3/8 05	994			
7	C-57 License No.	283326 (909) 931-4014		Conditions				
	Telephone	(404) 451-4014		***************************************				
	Well Depth log / months							
	Method of Well Assessment							
	Depth and Number of Perforations							
	Type of Perforator Size of Perforations							
	Type and Amount of Seniant							
	Method of Upper Seal Pressure Application	·						
Co the co Hi Wi Co	I hereby agree to comply in every respect with all the regulations of the County Environmental Health Division and with all ordinances and laws of the County of Los Angeles and the State of California pertaining to well construction, reconstruction and decommissioning. Upon completion of the well and within thirty days thereafter, I will furnish the Environmental Health office with a completion log of the well giving date drilled, depth of the well, perforations in the casing, and any other data deemed necessary by County Environmental Health Division.			Dute	टमद			
	<u>, </u>	Applications Repairs Roma W Halform 1714 1278-0592 K 3052	1	Date	RBHS			
A.	plicant Name: (PRINT) lephone:	1714/278-0592×3052						

WATE	COMMERCE DRIVE,	INTAIN & RURA BALDWIN PARI	L PROGRAMS - ENVIR K, CA 91706 (626) 430-5:	380 FAX (62	. HEALTH D 6) 813-3016	ivisi		DATE: 2/3/05	
	NEW WELL CON RECONSTRUCT DECOMMISSION OTHER:	ION OR RENOV	PMW 15	CA	NITORING THODIC ECTION IRACTION			— HEAT EXCHANGE OTHER (Specify):	
	SITE ADDRESS IN	the driveway	between (2) A. West-southwest	of Byron	Hier Rd., Sout	h of	Pivi	zipcode 90606 ieva Pol. 8189 ByRon Rd /12100 Rivera	ę,
	Township		Range	,	Section			Map Book Pager Grid Thomas Surde P. 707, A-	
製	no. of wells in	BACH PARCEL			Attach sits m	ap wi	th well	1 locations Lat. 33. 963806 / Long 118. 052826	
	Type and Size of Production Casing	4 inde dia	. Say yo pva		Согарапу			Arcadis G & M	
	Sanitary / Annular Scaling Material	95% coment	, 5% buttonite sli	mA;	Contact P	Grack)		Ron Halpern 1400 N. Harbor Blvd., Ste 700	
	Depth of Senitary /] \	nu water table		City , Star	e Zip		Fullerton, CA 92835	
	Annular Seal	0-35 6	 		Telephon			(714) 278-0992 x 3052	
	Conductor Casing Scal Well Owner	N/A	(Ob to be a second	· ala asa C	FOUND	TO DI	FFER I	OGIC CONDITIONS ENCOUNTERED IN THE FIELD ARE FROM THE SCOPE OF WORK PRESENTED TO THIS OFFICE, FICATIONS MAY BE RECOVERED	
(A.)	Address		to Christopher 1 ne St. Mail Stop SFI		WORK	LAN			
	City / Zip Code		co / 94105	P			IS CO	SPOSITION OF PERMIT (Department Use Only) NSIDEMED COMPLETE WHEN THE WORK PLAN IS SEN THE WELL COMPLETION LOG IS RECRIVED. NO WELL	
	Telephone	(415) 972			CONSTR	WCTI	ON OR	R DECOMMESSIONING CAN BE INITIATED WITHOUT THE DVAL FROM THIS DEPARTMENT.	
	Well Driller	Water Dov	elopment Corpose	tion					
	Address	5566 Arr				-	-		
	City / Zip Code	Montdoir	/ 91763		Days 3	B	[2]	REMS	
	C-57 License No.	283326	4014		Condition	<u>'</u>			
	Telephone	(909) 93	1 - 4014		 				
	Well Depth log / records								
	Method of Well Assessment	<u> </u>							
	Dopth and Number of Perforations								
	Type of Perforator Size of Perforations								
	Type and Amount of Scalant								
	Method of Upper Seal Pressure Application								
Courthe Cons cons well Heal	nty Environmental Ho Cenaty of Log Angoles truction, reconstruction and within thirty day th office with a complete	ealth Division and a and the State of on and decommis a thereafter, I will lettop log of the w	ith all the regulations of with all ordinances and California perfulating to doning. Upon competites if furnish the Environmental giving date driffed, deer data deemed necessar	inws of well R of the atal epth of the	Date			REHS	
Con	nty Environmental H	esith Division.					l		
	Jane	Application Sign	intere						
Appii Telep	cent Name: (PRINT)	Conald H	Son See See See See See See See See See Se		Date			REHS	

8 Mar'05 9:15;

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	PMW 16			

WAT		UNTAIN & RURA	- NÓ! L PROGRAMS - ENVIR K, CA 91706 (626) 430-3	CONMENTAL			DATE: R/3/05	
	DECONSTRUCT DECOMMISSION OTHER:	ion or renov Ning		CAT	NITORING THODIC ECTION (RACTION		HEAT EXCHANGE OTHER (Specify):	
	SITE ADDRESS ON SOUTHERST OF	Altamar P Dine Rd.	lace, about 310 A (near 9046 T	CITY GA	nta Fe Spring	<u>c</u>	ZIP CODE 9	10670
	Township		Range	·	Section		Map Book Page/ Grid	2
	no. of wells in	EACH PARCEL	: 1 (triple -no	well) A	ttach site map with we	ell locations	t. 93.956223 /Lon	q 118,065605
	Type and Size of Production Casing	Triple nes 2 ina. di	a. 304 80 Pu	رد ا	Сспираму		G KM	
	Senitary / Annular	95% convert	,5% bontonite d year scall highered a 0-95, 0-1	wry;	Contact Person	Ron Ho		,
1 1	Scaling Material	111 building	i gend Scott-Wolfeded Area	between	Address		Harbor Blyd.,	Ste 700
	Depth of Senitary / Annular Sea!	0-454	0-95, 0-1	65	City , State Zip		on, CA 92835	
	Conductor Casing Scal	NA		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Telephone	(314) 2	78-0992 x3	1052
	Well Owner		10 Christopher	Lichens		FROM THE SCO	ons encountered in t Pe of work presente: Y be required	
7	Address		ne St. Mail Stop St					
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· WELL FERMIT APPLICATION

NON-PRODUCTION WELLS

PMW 17

WAT		'LICA'I ION - NON-I'ROU UNTAIN & RURAL PROGRAMS - ENVIRONMENT , BALDWIN PARK, CA 91706 (626) 430-5380 FAX (AL, I		DATE: 2/3/05
\ 	NEW WELL CO!	NSTRUCTION PMW 174,8,4 V IN 100 OR RENOVATION CONTROL	ON ATI	IITORING HODIC CTION RACTION	HEAT EXCHANGE OTHER (Specify):
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	Type and Size of Production Casing	2 inch dia. SCH 80		Compeny	Arcadis G & M
	Senitary / Annulus Scaling Material	15% compact, 5% bentourite sharing		Contact Person Address	Ron Halpern 1400 N. Harbor Blvd., Ste 700
	Dopth of Sanitary / Annulus Seel	0-45 A; 0-95, 0-165		City , State Zip	Fullerton, CA 92835 (714) 278-0992 x 3052
	Conductor Curing Soci	NA A		Telephose	OGIC CONDITIONS ENCOUNTERED IN THE FIELD ARE
	Wall Owner	U.S. EPA c/o Christopher Lichens		POUND TO DIFFER	from the scope of work presented to this office, Fications may be required
	Address City / Zip Code	35 Hawthorne St. Mail Step SFD -7-4 San Francisco / 94105	4	THIS PERMIT IS CO.	SPOSITION OF PREMIT (Department Use Only) INSIDERED COMPLETE WHEN THE WORK PLAN IS
	Telephone	(415) 972-3149		CONSTRUCTION OF	HEN THE WELL COMPLETION LOG IS RECEIVED. NO WELL R DECOMMISSIONING CAN BE INTUATED WITHOUT THE DVAL FROM THIS DEPARTMENT.
1	Well Driller	Water Dayabamont Corporation	┨		
	City / Zip Code	5566 Arrow Hwy Montclair / 91763	1	Date 3 8 05	RELIGIO
	C-57 License No.	283316]	Conditions	
	Telephone	(909) 931-4014	_ -		
	Well Depth log / records		4		
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Appi		April Haforn, QC 1914)278-0992 «3052		Date	REHS

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	Type and Size of	T Chash-sway	<u>" /</u>		
	Production Casing	2 inch dia. SCH 80		Contact Person	Arcadis G & M Ron Halpern
	Sanitury / Annular Saaling Material	95% perment, 5% benefacite st 111 bendente sent schildren Internation	mind?	Address	1400 N. Harbor Blvd. Ste 700
	Dopth of Sanitary /	1 1		City , State Zip	Fullerton, CA 92835
	Animiar Scal Conductor Casing	0-55 4, 0-105, 0-165	-	Telephone	(714) 278-0992 x 3052
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	Well Owner	U.S. EPA c/o Christopher Lie			From the Scope of Work Presented to this Office, Pications may be required
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	City / Zip Code	San Francisco / 94105		APPROVED AND WI	nsidered complete when the work plan is ten the well completion log is received. No well
	Telephone	(415) 972-3149			I DECOMMISSIONING CAN BE INITIATED WITHOUT THE EVAL FROM THIS DEPARTMENT.
	Well Driller	Water Development Corporati	ion		
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	City / Zip Code	Montclair / 91763		1-440	
	C-57 License No.	283326		Conditions (
	Telephone	(909) 931-4014			
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	former	Male			
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Job 957; Page 10/13

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		Conductor Caring	1			Telephone	(714) 278-0992 x 3052	2
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ent	By: ADMINIST	RATION;		626 813	3016;	8 Mar'05 9:14; Job 957; Page 3/13	_
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į	Township	,	Rango		Section	Map Book Page/ Grid	ł
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	Telephone	(415)972	-3/49			i or decommessioning can be initiated without the Proval from This department.	
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I beraby agree to comply in every respect with all the regulations of the County Environmental Health Division and with all ordinances and laws of the County of Los Angeles and the State of California peristaing to well construction, reconstruction and decommissioning. Upon completion of the well and within thirty days thereafter, I will furnish the Environmental Health effice with a completion log of the well giving date delied, depth of the well, perforations in the casing, and any either data deemed necessary by County Environmental Health Division.

Applicant Name: (PRINT) Romald Hafacon, RC Telephone: (114) 278-0992 × 3052

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_ 4	AT		JNTAIN & RURA	- NOI L PROGRAMS - ENVI K, CA 91706 (626) 430-5		HEALTH D			DATE: 2/3/05	
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Job 957; Page 8/13 PMW 27. Alt. # 2

γ	ΑΤ		UNTAIN & RURA	" NOI LL PROGRAMS - ENVIR K, CA 91706 (626) 430-5		HEALTH D		DATE: 2/3/05	
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		Sanitary / Annular Scaling Material	95% coment	,5% bentonite o	yand!	Contact P	erson	Ron Halpern 1400 N. Harbor Blyd., ste 700	
		Dopth of Sanitary /	()			City , Sea	ne Zilo	Fullerton, CA 92835	
		Annular Seal	0-45	*************************************		Telephon		(714) 278-0992 x 3052	
N. S. C.		Conductor Casing Seal	N/A			D WELL	L AND CEOL	OGIC CONDITIONS ENCOUNTERED IN THE FIELD ARE	
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	w ell , Cou	perforations in the cr aty Environmental He	aring, and any oth raith Division.	ell giving date drilled, de per data deemed necessar	ry by	Dute	<u> </u>	RESHS :	
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	i ppů Felej	teant Name: (PRINT)	Ponole 1	18-0992×3	250	Date		REGIS	

Job 957; Page 2/13

VELL	PERMIT	APPLICATION	-	NON-PRODUCTION WELL
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WATER & SEWAGE / MOUNTAIN & RURAL PROGRAMS - ENVIRONMENTAL HEALTH DIVISION 3050 COMMERCE DRIVE, BALDWIN PARK, CA 91706 (626) 430-5380 FAX (626) 813-3016

DATE: 2/3/05

SITE ADDRESS Approximately 740 feet city Santa Fe Springs zip code 9067 Southeast of the Intersection of Sorensen Arc and Bucke St. (near 12012 Bucke St.) Township Range Section Map Book Page/ Crid LA 707.1 A2 NO. OF WELLS IN EACH PARCEL: (Triple-ne Sted) Attack site map with well locations Lat 33, 960361/Long-116 Type and Size of Production Casing Type and Size of Production Casing Society / Annalist Society / Annalist Society / Annalist Society / Annalist Book went text panse of Annalist Doppt of Sanitary / O-45, 0-105, 0-165 City. Size Zip Fallenten, CA 92835	
NO. OF WELLS IN EACH PARCEL: \(\begin{align*} \text{Triple-ne stee} \\ \text{Cluster Well} \end{align*}\) Attack size map with well locations Lat 33, 960361 \(\left(\text{Long-ille} \) \\ Type sad Size of Production Casing Production Casing A-75. Comment 5% Armford Take Contact Person Row HALPER W Sanitary / Annular Seniory Annular Senior Take Senior Take Senior Address 1400 M. Har Bor Blud , She	0
Type and Size of 2-Inch diam Sch 80 PVC Production Casing Sanitary / Annaber Seeling Maserial Action of the Company Account	
Senitory / Annator & Former Tox Benser Person Row HALPERA Address 1400 M. HORBOR BIND, Ste	1.059364
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Talephone (415) 972-3149 CONSTRUCTION OR DECOMMISSIONING CAN BE INITIATED WITH WORK PLAN APPROVAL FROM THIS DEPARTMENT.	
Well Driller under Development Corp	
Address 5566 Acrow Huy	经验证明经验
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Marked of Upper Seal Pressure Application	
I hereby agree to comply in every respect with all the regulations of the County Environmental Health Division and with all ordinances and laws of the County of Los Angeles and the State of California pertaining in well construction, reconstruction and decommissioning. Upon completion of the well and within thirty days thermafter, I will furnish the Environmental Health office with a completion log of the well giving date drilled, depth of the well, perforations in the casing, and any other data decrease ry by County Environmental Health Division. Applicant Names (PERNT) Ronal W Helpern, EC Triephones Triephones Total County Environmental Health Division Reinstance Reins	

ARCADIS

Appendix C

Well Locations Maps

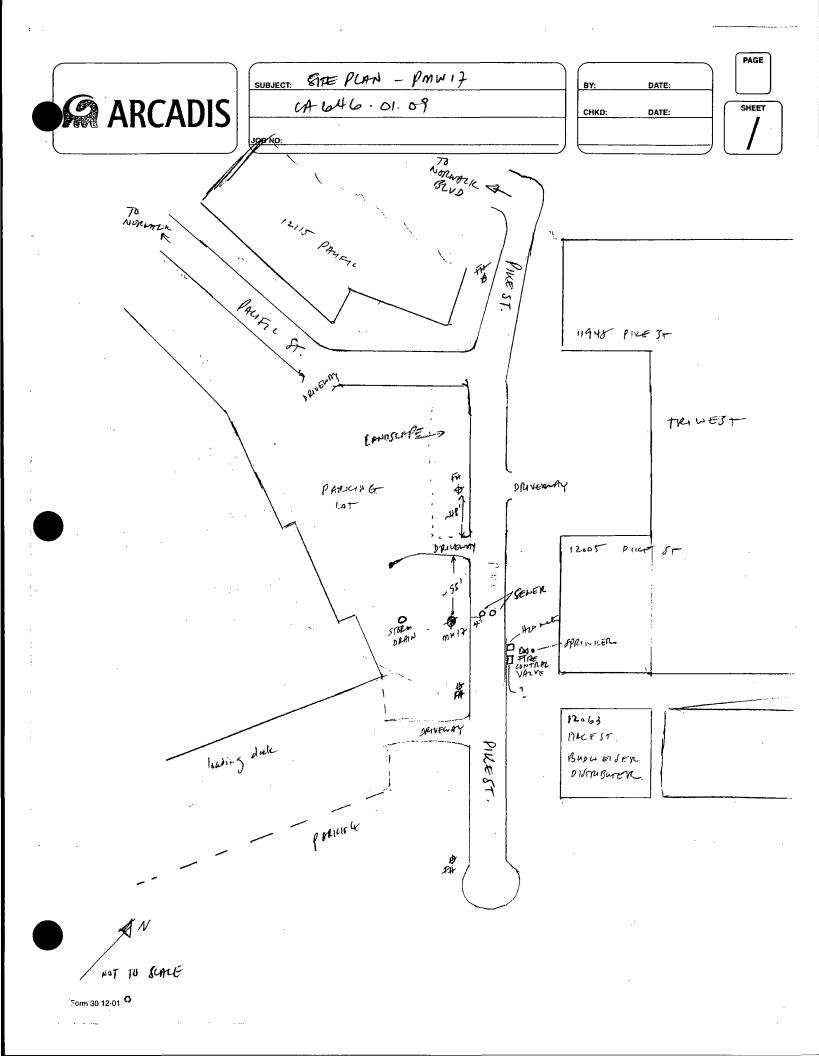


7628 Baldwin Pl, who CITY whittie. SITE ADDRESS or APN ZIP CODE Range Section wnship Map Book Page/ Grid Provide a scaled drawing (1" = 50') indicating property lines, sewers, private sewage disposal systems within 200 feet of the well site along with labels and dimensions. Attach all documents that confirm that the well is located the required distance from the septic systems. WELL LOCATION **NORTH** B.L. Willex A+1 MJg 7623 Galgeri, blace 7635 Storage roo } dreinnye **②** WELL SITE Hsn 1 Well Location 12427 Sail Boring S sever mannsk Eg Building Hedman Hedders 12433 12433 scale 1"-50' FI Drive way

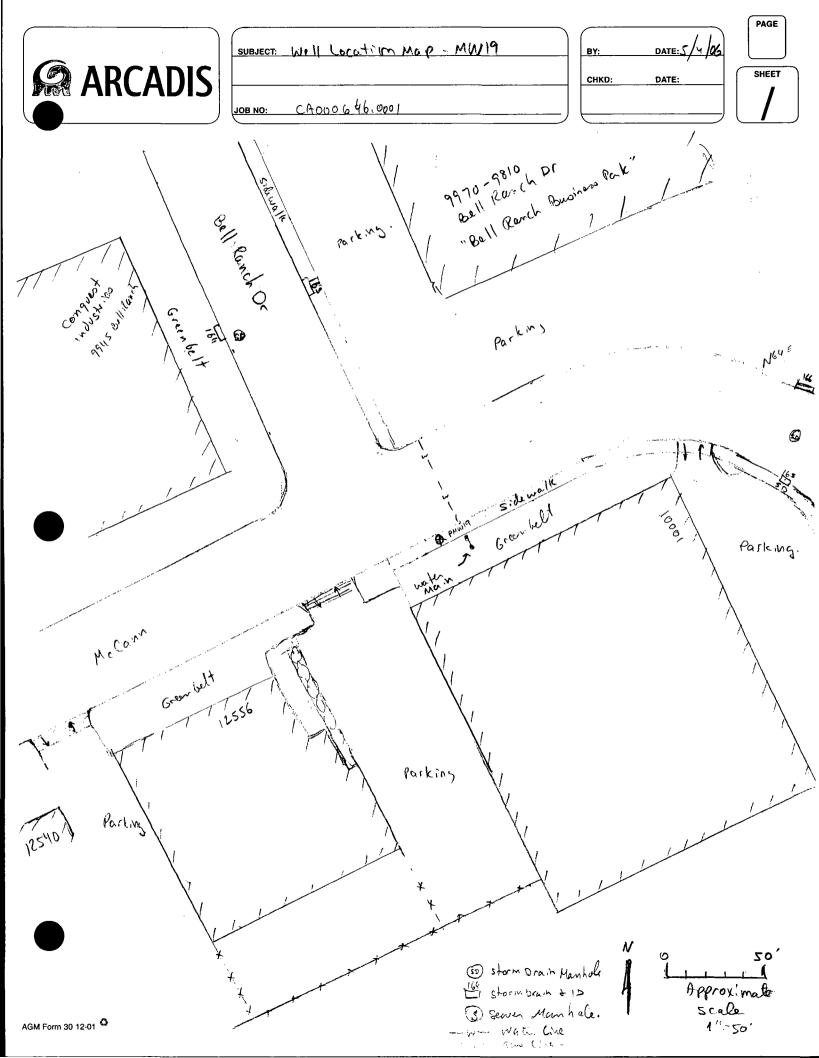
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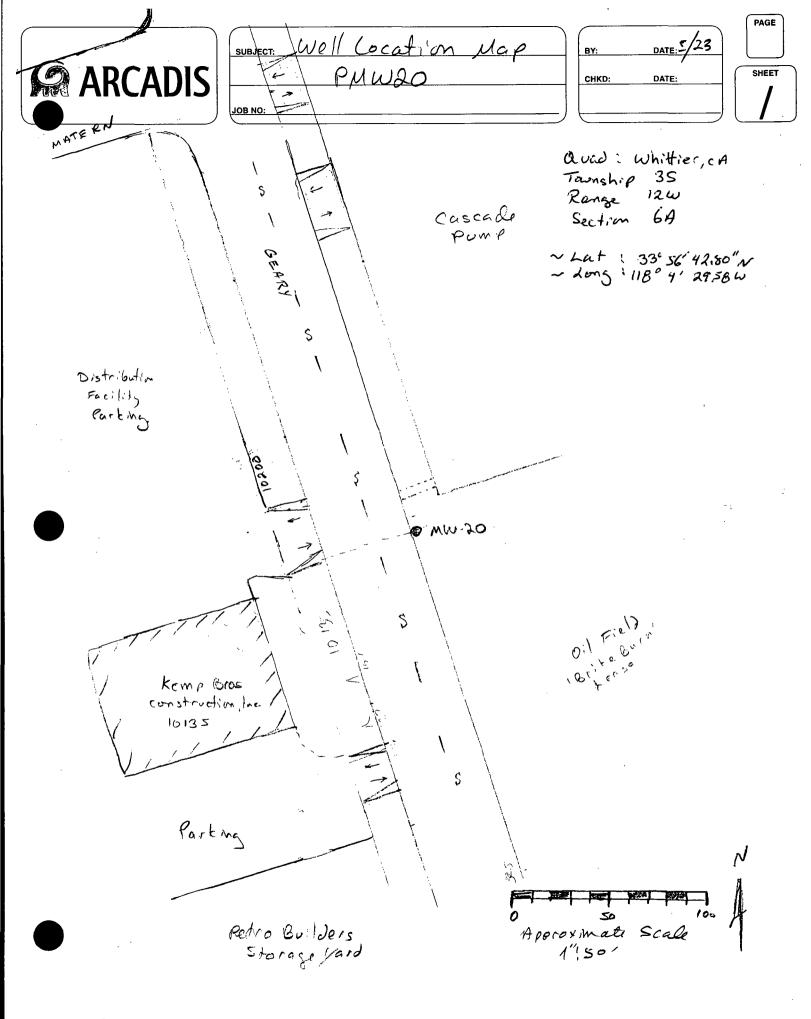
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WELL LOCATION	Provide a scaled drawing (1" = 50' labels and dimensions. Attach all do) indicating property lines, sewers, private ocuments that confirm that the well is loca	e sewage disposal systems within 200 feet of the well si ted the required distance from the septic systems.	ite along with
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SITE ADDRESS or APN		CITY	. ZIP CODE
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WELL LOCATION	Provide a scaled drawing (1 labels and dimensions. Attack	= 50') indicating property lines, sewers, p h all documents that confirm that the well i	orivate sewage disposal systems within 200 feet of the well site along with s located the required distance from the septic systems.
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site ADDRESS or APN In gre of Ann St, ~ 174 fee	en belt on south sic tese from 4 of SFS Rd	(9400 SFS RJ)	ZIP CODE
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WELL LOCATION	Provide a scaled drawing (1" = labels and dimensions. Attach a	50') indicating property lines, sewers, privatell documents that confirm that the well is located to the second series of the second se	e sewage disposal systems within 200 feet of the well site along with sted the required distance from the septic systems.
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SITE ADDRESS or APN ZIP CODE Santa Fe Springs, CA 9929 Pioneer Blud Range Township Section Map Book Page/ Crid Provide a scaled drawing (1° = 50°) indicating property lines, sewers, private sewage disposal systems within 200 feet of the well site along with labels and dimensions. Attach all documents that confirm that the well is located the required distance from the septic systems. WELL LOCATION Driveway **NORTH** Hamden Pl. Key Sewer Manhole Storm Drain 155 / Storm Orain Approximation Scale dato

SITE ADDRESS OF APN ACTOSS from 117	49 Terradellst.	CITY Santa Fe.	Springo	ZIP CO DE
wnship	Range	Section	Map Book Page/ Grid	
WELL LOCATION	Provide a scaled drawing (1" = 50 labels and dimensions. Attach all c	') indicating property lines, sewers, pr locuments that confirm that the well is	ivate sewage disposal systems within 200 feet o located the required distance from the septic sy	f the well site along with stems.
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SITE ADDRESS OF APN 12110 Slaws	m Anc	city Santa Fe Spriv	160	ZIP CODE		
swnship	Range Section		Map Book Page/ Grid			
WELL LOCATION	Provide a scaled drawing (1" = labels and dimensions. Attach a	50') indicating property lines, sewers, prill documents that confirm that the well is	ivate sewage disposal systems wit located the required distance fror	hin 200 feet of the well n the septic systems.	site along with	
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BY: RMH DATE: 6/29/05 SUBJECT, Omega Chemical OU-2 **ARCADIS** CHKD IOB NO SO Storm Drain Manhole
SO #110 Storm Drain and 19#
FHO Fire Hydrant SORENSEN + soil Boring (set) or cot

+ Monitoring well (MW)

no water main

w- underground water line seever manhole underground gas line Keynew loc Greenbelt (9) しょす Parking 9 A Domeway 95h -> 50 12035 Boundary of City Right-of-way BURKE hist area Green belt ipproximate 4f09="1" S 2034 AGM Form,30 12-01 O

ARCADIS

Appendix D

Boring Logs and Sample ID Logs, Geophysical Logs, and Well Construction Diagrams



LOG OF BORING EW-1

Infrastructure, environment, facilities (Page 1 of 4) : MiniRae Omega Chemical Operable Unit 2 **Date Completed** : May 25, 2005 OVA Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller : Ronald Halpern, PG : Mud Rotary Checked By **Drilling Method** : WDC **Drilling Company** Diameter : 9.75 Drill Rig Calibration Gas/Conc : 100 ppm isobutylene : Mud Rotary Well: EW-1 Recovery % Elev.: 152.43 Depth Time OVA DESCRIPTION in Feet Lab No. Cover 0. Grass surface to ~6". Surface Casing 08:25 (Off mud-return) SILT with CLAY and SAND, ~10-20% Sand, black (7.5YR 2.5/1). 08:33 (Off mud-return) CLAYEY SILT, soft, olive 5 (5Y 4/4), moist. 10 08:40 Same as above. 95% Cement/ 5% Benseal Slurry 4" Dia Sch 80 PVC Blank ML. 15-08:47 Same as above - medium stiff. Increasing SAND content ~5-10% fine to medium Sand (max. 1.5 mm diameter). 20-09:01 (Off mud-return) SILT with SAND and CLAY, ~20% fine to medium Sand, ~10-20% Clay, olive brown (2.5Y 4/4). 25

DESCRIPTION OF BORING LOCATION: On side of Burke just east of Sorenson, in greenbelt, between MW-8A and MW-8D.

ARCADIS

Infrastructure, environment, facilities

LOG OF BORING EW-1

(Page 2 of 4)

Omega Chemical Operable Unit 2

Date Completed

: May 25, 2005

OVA Driller : MiniRae

Project No. CA000646.0001

Logged By Checked By

: Ronald Halpern, PG : Ronald Halpern, PG

Drilling Method

: Mud Rotary

Drilling Company

: WDC

Diameter

: 9.75

Drill Rig

: Mud Rotary

Calibration Gas/Conc : 100 ppm isobutylene

										
	Depth in Feet	Samples	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	Well: EW-1 Elev.: 152.43
	25- - -						ML		, , , , , , , , , , , , , , , , , , ,	
	30-						SP/SW		(Off mud-return) Poorly graded SAND, predominantly (~80%) fine to medium (max. 2 mm diameter), ~20% coarse (max 5 mm diameter) Same. Lots of "chatter" from 30-37', possible gravel.	
	35			09:27			SP		Same as above. (Off mud-return) Poorly graded SAND, fine	95% Cement/ 5% Benseal Slurry 4" Dia Sch 80
	}								(Off mud-return) Poorly graded SAND, fine to medium grained (max. 1 mm diameter), olive brown (2.5Y 4/4), wet.	PVC Blank
]					1	SP/SW	Probabilities Organisation	Some chatter ~38-39'. Well graded SAND	NA NA
	40	_		09:32			SP		Poorly graded SAND, as above.	
JMMON\MTech5\Omega Chemica\\EW-1.BOR	45			09:45			sw		(Off mud-return) Well graded SAND, fine to coarse Sand, (max. 5 mm diameter), subangular to subrounded.	
≾ا	50-								I	

DESCRIPTION OF BORING LOCATION: On side of Burke just east of Sorenson, in greenbelt, between MW-8A and MW-8D.



LOG OF BORING EW-1

(Page 3 of 4)

: May 25, 2005 OVA : MiniRae Omega Chemical Operable Unit 2 **Date Completed** Driller Project No. CA000646.0001 Logged By : Ronald Halpern, PG **Drilling Method** : Mud Rotary : Ronald Halpern, PG Checked By : WDC **Drilling Company** Diameter : 9.75 Drill Rig : Mud Rotary Calibration Gas/Conc : 100 ppm isobutylene Well: EW-1 GRAPHIC Recovery % Elev.: 152.43 Depth Time OVA DESCRIPTION in Feet Lab No. 50 Fine and coarse GRAVEL (<5%) observed. 95% Cement/ 5% Benseal Slurry Lot of chatter at 55'. Well graded SAND with Gravel, ~20-30% Gravel, ~70-80% well-graded fine to coarse Sand, Gravel 55 09:55 SW (max 15 mm diameter) (subrounded, igneous rock with quartz and mafic -4" Dia Sch 80 PVC Blank materials). Medium Chips 10:00 60 (Off mud-return). SILT, olive brown. #30 Transition Sand ML 65 #2/12 Sand Pack -4" Dia Sch 80 PVC w/0.02" Slotted Screen 10:26 (Off mud-return) Poorly graded SAND, fine 70to medium grained. SP (Off mud-return) Chattering stopped at ~73'. SILTY CLAY with SAND, ~10-20% CL fine to medium Sand, occasional fine Gravel, olive brown, soft to medium stiff

DESCRIPTION OF BORING LOCATION: On side of Burke just east of Sorenson, in greenbelt, between MW-8A and MW-8D.

ARCADIS LOG OF BORING EW-1 Infrastructure, environment, facilities (Page 4 of 4) Omega Chemical Operable Unit 2 **Date Completed** : May 25, 2005 OVA : MiniRae Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller : Mud Rotary Checked By : Ronald Halpern, PG **Drilling Method** : 9.75 : WDC Diameter **Drilling Company** Calibration Gas/Conc : 100 ppm isobutylene : Mud Rotary Drill Rig Well: EW-1 GRAPHIC Samples Elev.: 152.43 Depth OVA Time **USCS DESCRIPTION** in Feet Lab No. 75 #2/12 Sand Pack -4" Dia Sch 80 PVC Blank CL Medium Chips 80 Bottom of boring at 80'. 85 90-95-100-DESCRIPTION OF BORING LOCATION: On side of Burke just east of Sorenson, in greenbelt, between MW-8A and MW-8D.

ARCADIS LOG OF BORING MW12 Infrastructure, environment, facilities (Page 1 of 5) Omega Chemical Operable Unit 2 **Date Completed** : August 9, 2005 OVA : MiniRae Project No. CA000646.0001 : Ronald Halpern Logged By Driller : Dan : Ronald Halpern Checked By **Drilling Method** : Sonic **Drilling Company** : WDC Diameter : 6 1/4" Drill Rig : Sonic SpeedStar 15K Calibration Gas/Conc : 100 ppm isobutylene Weli: MW12 Blow Count GRAPHIC Recovery % Elev.: 221.23 Depth Time OVA in DESCRIPTION Feet Lab No. Cover 0 Concrete to approximately 6". Surface 0.5-8' core: SILTY CLAY, stiff, slightly moist, dark yellowish brown (10YR 4/4), no odor. 0.0 CL Same as above. 10:30 0.0 9.5-11' core: Well graded GRAVEL with Sand and Silt, ~60-70% fine and coarse Gravel 10 0.0 (max 55 mm dia.), ~25-30% fine to coarse well graded Sand, ~10% Silt, dark yellowish GW-GM^e 95% Cement/ 5% Bentonite brown (10YR 4/4), no odor, Gravel and Sand subangular to subrounded. 2" Dia. Sch. 80 0.0 None **PVC** 14-19' core: High plasticity, CLAY, very stiff, moist, dark grayish brown (10YR 3/2), no odor, high toughness, high liquid limit, very plastic, no dilatency. 15 10:52 0.0 COMMON/MTech5/Omega Chemical/MW-12.BOR CH 20 Same as above. 11:10 0.0

In the greenbelt on the east side of Dice Road, approximately 85 feet north of the centerline intersection with Altamar Place.

0.0

11:24

ARCADIS LOG OF BORING MW12 Infrastructure, environment, facilities (Page 2 of 5) : August 9, 2005 OVA : MiniRae **Date Completed** Omega Chemical Operable Unit 2 Project No. CA000646.0001 Logged By : Ronald Halpern Driller : Dan Checked By : Ronald Halpern **Drilling Method** : Sonic **Drilling Company** : WDC Diameter : 6 1/4" Calibration Gas/Conc : 100 ppm isobutylene : Sonic SpeedStar 15K Drill Rig Well: MW12 Blow Count GRAPHIC Elev.: 221.23 Depth OVA Time DESCRIPTION in Feet Lab No. 25 0.0 CH Same as above. 27-29' core: Poorly graded SAND with Clay and Gravel, ~35-50% predominantly fine subangular Gravel (<=20 mm dia.), ~55-60% 0.0 SP-SC fine and coarse Sand (gap grades), ~5% Clay, dry, dark yellowish brown (10YR 4/6), no odor, Gravel sub-spherical and 30 12:02 0.0 subrounded of granitic origin. 30-31.5' core: CLAYEY SAND with Gravel. 20% fine and coarse subrounded Gravel SC-CL (max 35 mm dia.), ~40% predominantly wellf fine to coarse Sand (subrounded) in 40% 0.0 Silty Clay matrix, dense, moist, brown (10YR 4/3), caliche and brownish yellow (10YR 6/8) 12:29 patches, (conglomerate). 35 1.5 34-36': Same as above. 95% Cement/ 13:10 5% Bentonite SC 37-39' core: Same as above. ⁻2" Dia. Sch. 80 PVC 0.3 13:30 1.0 39-44' core: Low plasticity SILT, stiff, moist, 23 brown (7.5YR 4/4), occassional fine Gravel. 46

44-47.5': SILTY CLAY with Sand, ~5% fine

subangular Gravel (max 15 mm dia.), ~10% fine to coarse Sand (max 5 mm dia.), ~85% fines, brown (7.5YR 4/2), moist, stiff, no odor, moderate to high toughess, moderate

plasticity.

In the greenbelt on the east side of Dice Road, approximately 85 feet north of the centerline intersection with Altamar Place.

14:30

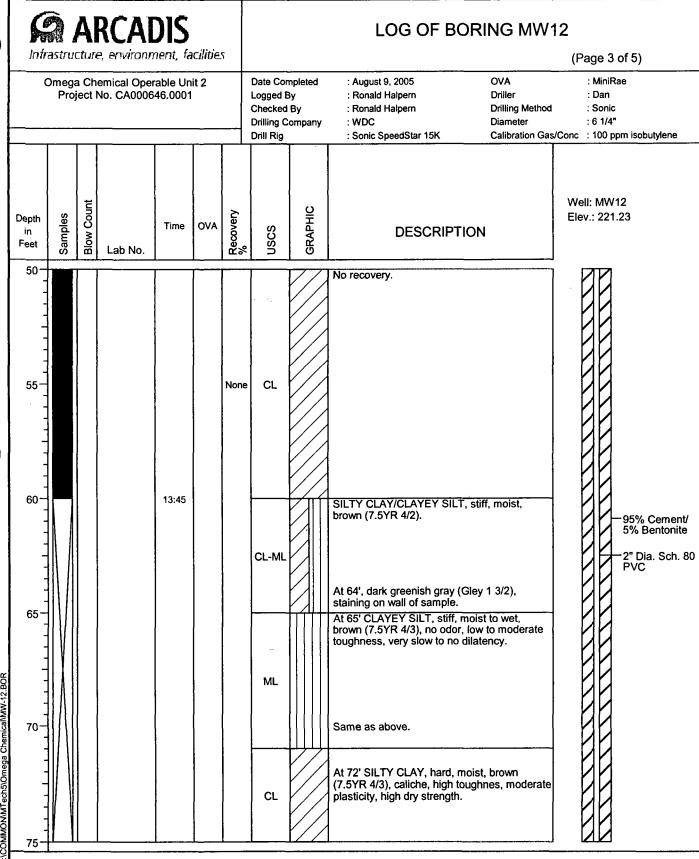
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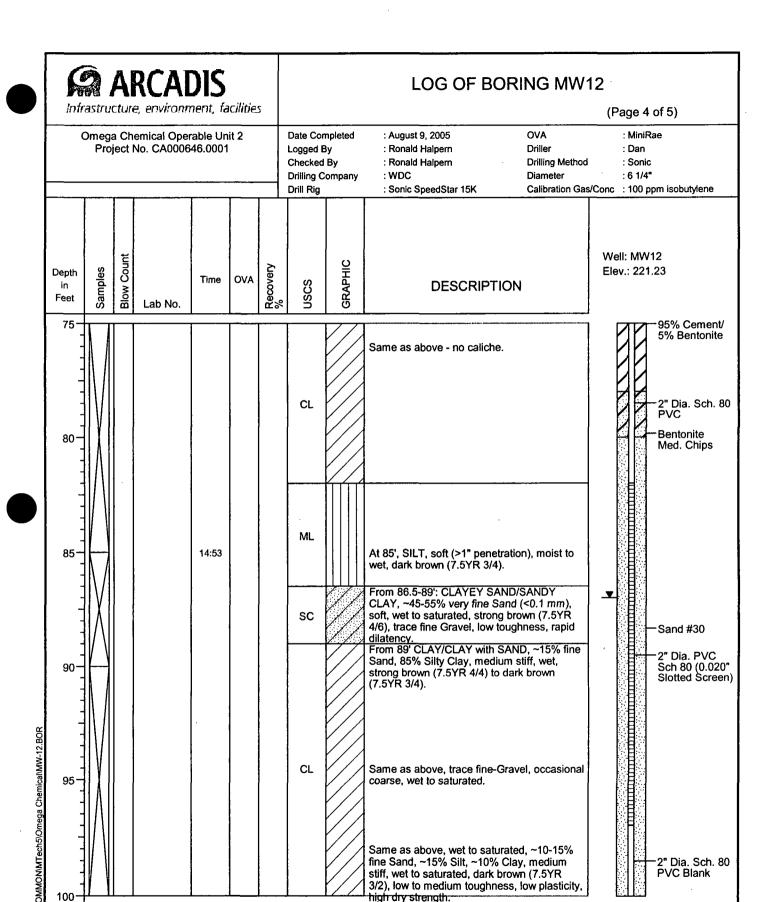
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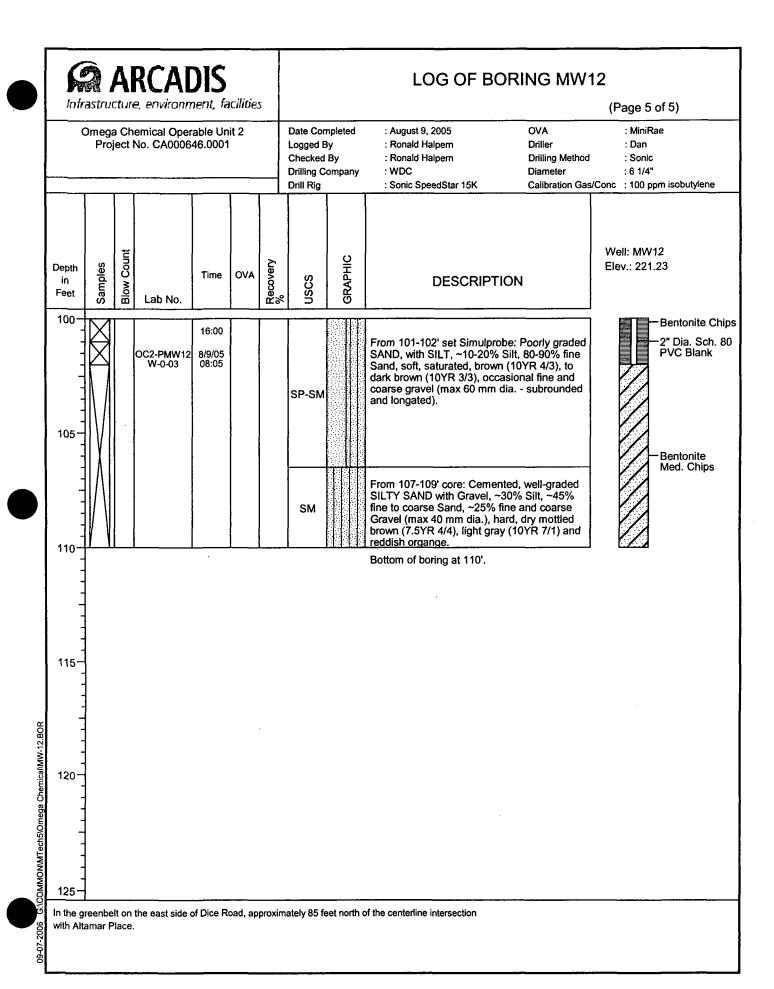
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In the greenbelt on the east side of Dice Road, approximately 85 feet north of the centerline intersection with Altamar Place.



In the greenbelt on the east side of Dice Road, approximately 85 feet north of the centerline intersection with Altamar Place.



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SAMPLE IDENTIFICATION LOG

SAMPLE IDENTIFICATION LOG Sampled Sample												
- 7												
Date	Time	Operable Unit	Well Location	Medium (Water or Soil)	Type ¹ (0 thru 6)	Sequential Sample No.	Remarks					
	1			Duplicate; 2 - f			ipment Blank					
Sample Ty		rip Blank;	s, 1-Fieiu 5 ₋ 1	MS/MSD;	6 - Regula	o - ⊑qu ton: Solit	ipment blank					
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8/0/03	09:15		PHW17	<u> </u>		01	Tr; P 1 WA					
	09:18	OC2	PANIZ	ين	2	02	Pield Blue 300A					
8/9/05	03:05	002	BUM)5		8	03	01021 3x 40ml					
	103109	002	PMW12	w	9	0 4	Dup @ 102 3x40n1					
4	09:05	002	PNW12	~	Ġ	05	Dup @ 102 3x 40 ml					
	 											
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ARCADIS LOG OF BORING MW13 Infrastructure, environment, facilities (Page 1 of 3) **Date Completed** : July 1, 2005 OVA : MiniRae Omega Chemical Operable Unit 2 Whittier & Santa Fe Springs : Ronald Halpern Driller : Steve Houston Logged By Project No. CA000646.0001 Checked By : Ronald Halpern **Drilling Method** : Mud Rotary : 10" : WDC **Drilling Company** Diameter Drill Rig : GEFCO Star 30K Calibration Gas/Conc : Isobutylene 100 Well1: MW13A Well2: MW13B Blow Count Recovery % Elev.: 206.30 Depth OVA Time DESCRIPTION Feet Lab No. Cover Concrete Surface Casing Concrete to 6" (Off cyclone). SILTY CLAY, firm to stiff, dark brown (10YR 3/3), moist. 6/29/05 0.1 10 15 Same as above. Approximately 5% fine to 20 12:46 coarse SAND. 95% Cement 25 CL 5% Bentonite Slurry (30-31' Split Spoon). SILTY CLAY, stiff, dark yellowish brown (10YR 4/4), moist, 2" Dia.Sch. 80 PVC Blank 30 \boxtimes 13:38 N/A 0.1 moderate to high toughness, no dilatency, high plasticity, occassional fine gravel (max 20 mm dia.) and coarse sand (max 4 mm dia.). 35 OMMONIMTech5\Omega Chemical\MW-13.BOR (40-41' Split Spoon). SILTY CLAY, stiff, dark yellowish brown (10YR 4/4), moist, 40 \boxtimes N/A 14:30 0.1 high toughness, high plasticity, slow dilatency. 45 50 Boring in front of Fred Rippey at 12482 Putnam Street. Elevation noted is ground surface.

Boring in front of Fred Rippey at 12482 Putnam Street. Elevation noted is ground surfact A = shallow (dry); B = deeper.

ARCADIS LOG OF BORING MW13 Infrastructure, environment, facilities (Page 2 of 3) Omega Chemical Operable Unit 2 Date Completed : July 1, 2005 OVA : MiniRae Whittier & Santa Fe Springs Logged By : Ronald Halpern Driller : Steve Houston Project No. CA000646.0001 Checked By : Ronald Halpern **Drilling Method** : Mud Rotary **Drilling Company** : WDC Diameter : 10" Drill Rig : GEFCO Star 30K Calibration Gas/Conc : Isobutylene 100 Well1: MW13A Count Well2: MW13B **SRAPHIC** Recovery % Depth Elev.: 206.30 OVA Time Blow (DESCRIPTION Feet Lab No. 50 95% Cement (50-51 Split Spoon). SILTY CLAY, hard, \bowtie 16:20 0.1 5% Bentonite dark yellowish brown (10YR 4/4), moist. Slurry CL Medium Bentonite Chips 55 (60.75' Split Spoon). Low plasticity, SILT/poorly graded Sand, very fine-grained, stiff, olive (5Y 4/4), moist, low toughness, rapid dilatency, low plasticity, low dry strength, light gray artifacts, possibly of 2" Dia.Sch. 80 **PVC Blank** ML-SF 60 \boxtimes 16:55 2" Dia. PVC Sch 80 (0.020" Slotted Screen) marine origin, light yellowish brown oxidation stain (~1/4" thick). From apprx. 63' off shaker - poorly graded #2/16 Sand SP 65 Sand, fine-grained, olive. (70-71' Split Spoon). CLAYEY SILT, stiff, light olive brown (2.5Y 5/4), moist, 2" Dia.Sch. 80 **PVC Blank** moderate to high toughness, moderate \bowtie Medium 17:25 plasticity, slow to moderate dilatency, light 6/29/05 Start 6/30/05 Bentonite Chips gray artifacts (possible marine shells?). low to moderate strength. ML-CI 75 80 2" Dia.Sch. 80 \boxtimes 07:50 (80-81' Split Spoon). SILTY CLAY, hard, yellowish brown (10YR 5/4), moist, high PVC Blank СН toughness, moderate to high liquid limit, no dilatency, high plasticity, high dry strength. 85 \boxtimes (85-86' Split Spoon). CLAYEY SILT/SILTY CLAY, very stiff, (<1/4" penetration), brown (7.5YR 4/3), moist, low to moderate 08:30 1:1 Bentonite OMMON\MTech5\Omega Chemical\MW-13.BOR Sand Mix toughness, moderate plasticity. 90 (90-91' Split Spoon). CLAYEY SILT/SILTY \boxtimes 09:20 CLAY, very stiff, brown (7.5 YR 4/4), moist, low to moderate toughness, low CL plasticity, slow dilatency.

(95-96' Split Spoon). CLAYEY SILT/SILTY

CLAY, very stiff, brown (7.5 YR 4/4), moist, low to moderate toughness, low

plasticity, slow dilatency.

Boring in front of Fred Rippey at 12482 Putnam Street. Elevation noted is ground surface. A = shallow (dry); B = deeper.

09:45

95

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 \boxtimes

ARCADIS LOG OF BORING MW13 Infrastructure, environment, facilities (Page 3 of 3) Date Completed OVA : MiniRae Omega Chemical Operable Unit 2 : July 1, 2005 Whittier & Santa Fe Springs Logged By : Ronald Halpern Driller : Steve Houston Project No. CA000646.0001 Checked By : Ronald Halpern **Drilling Method** : Mud Rotary **Drilling Company** : WDC Diameter : 10" Drill Rig : GEFCO Star 30K Calibration Gas/Conc : Isobutylene 100 Well1: MW13A Well2: MW13B **Blow Count** Recovery % Depth Elev.: 206.30 Time OVA USCS DESCRIPTION Feet Lab No. 100 Driller noted easier drilling @102'. ML-CL (105-106' Split Spoon). High plasticity, 105 \bowtie CLAY, hard, brown (10YR 5/3), moist, high 11:40 liquid limit, no dilatency, high toughness, high plasticity, high dry strength. 1:1 Bentonite 110 СН Sand Mix (115-116' Split Spoon). SILTY CLAY, hard, dark yellowish brown (10 YR 4/4), moist, high toughness, high liquid limit, high × 12:12 plasticity, high dry strength. Medium (120-121' Split Spoon). SANDY SILT with 120 Bentonite Chips \boxtimes 17:40 ML clay, approx 10-20% clay, approx 30-40% very fine to fine sand, approx 40-60% silt; 2" Dia.Sch. 80 **PVC Blank** stiff, dark yellowish brown (10 YR 4/4), moist, low plasticity, low toughness, moderate dilatency, low dry strength. top\18:0 #2/16 Sand 125 SP (122 off E-log; from 124 off shaker; OC2-PMW13 Start 125-126 Split Spoon). Poorly graded 7/1/05 07:15 W-0-04 SAND, approx 90% fine-grained, 10% 2" Dia. PVC medium-grained, (0.5-1 mm dia.), dark grayish brown (2.5 Y 4/2), wet/saturated. Sch 80 (0.020" Slotted Screen) OC2-PMW13 W-0-04 130 Increased SILT content with depth. SM (133-134' Split Spoon). Low plasticity CL CLAY, approx 3-5% fine sand, firm to very stiff (approx 1/4" penetration), light olive 135 OMMON\MTech5\Omega Chemical\MW-13.BOR 2" Dia.Sch. 80 brown (2.5Y 5/3) with oxidation stains SW **PVC Blank** ranging from yellowish brown to dark reddish brown (5YR 3/4), moist to wet, low to moderate toughness, low liquid limit, 140 moderate dilatency, low to moderate plasticity, possible organic (continental) artifacts, preferred horizontal fracture (135-139' off E-log): SAND 145 Bottom of boring at 139'. 150 Boring in front of Fred Rippey at 12482 Putnam Street. Elevation noted is ground surface. A = shallow (dry); B = deeper.

PMW13

SAMPLE IDENTIFICATION LOG

SAMPLE I	DENTIFICA	TION LOG					
Date	environity the property of the	Operable Unit	Location	Sampled Medium (Water or Soil)	(0 thru 6)		Remarks
sample Ty							Equipment Blank
		rip Blank;		MS/MSD;	γ	tory Split.	<u> </u>
6/30/05	07:43	002	PMW13	W	4	01	Trip 1x40ml VOA
·	7:50	012	PAlasta		0	02	Sail Sample 80,5-81 gt
F/1/05	07:00	002	BN4113	W	2	03	Soil Sample 80,5-81 44 Frold Blule
	07:15	DCZ	PANIS	121	0	04	@ 128' 3x 40 m/Von-ch
	07:15	OCZ	PM 613	W	1	05	Duplical C/27' 3×40,
	07:50	OC7	Pru B	W	3 .	06	Frels Equipmet
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PACIFIC SURVEYS

Witnessed By

ELECTRIC LOG LATEROLOG 3 GAMMA RAY

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Job No. 12104	Company	WDC	EXPLORA	TION & WE	118	
12104	Company	WDC	LAFLONA	TION & WE	LLO	
	Well	PMW-	-13			
	Field	WHIT	TIFR			
File No.	1					
	County	LOS A	ANGELES	State	CA	
Location:	<u></u>				Other Servi	ces:
12482 PUTNAM	IST.				GR/LL3 CALIPER	
Sec.	Twp.		Rge.		<u> </u>	
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og Measured Fr		6. L .	0'	above perm. dat	tum	K.B. D.F. G.L.
Drilling Measured	From G	i. L.				Ğ.Ĺ
Date		7-1-05	,			
Run Number		ONE				
Depth Driller		139'				
Depth Logger		139'				
Bottom Logged II	nterval	138'				
op Log Interval		10'				
Casing Driller		9.5" @) 18'			
Casing Logger		18'				
Bit Size		9"				
ype Fluid in Hole		BENT	ONITE			
Density / Viscosit	.y	N/A				
H / Fluid Loss		N/A				
Source of Sample		PIT				
≀m @ Meas. Te		7.8 @				
Rmf @ Meas. Te		8.8 @	77F	<u> </u>		
Rmc @ Meas. Te		N/A				
Source of Rmf /	Rmc	MEAS	i			
m@BHT		N/A				
ime Circulation		N/A				
ime Logger on E		9:30 A	M			
Nax. Recorded T		N/A	-1			
quipment Numb	er	PS-2				
ocation		L.A.				
Recorded By		LAPOI	RTE			
Vitnessed By		R. HA'	LPERN			

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or wilful negigence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and confidence on the confidence of

Comments

			EL	OG Calibration	Report				
	Serial: Model:			D1 DTQ					
В	Shop Calibratio Before Survey \ After Survey Ve	erification Pe	erformed: formed:	Mon .	or 29 12:26:0 Jun 06 11:08 or 29 12:32:4	:02 2005			
Shop Ca	libration								
	Readi Zero	ngs Cal		Referer Zero	nces Cal		Results Gain Offse		
Short .ong	8.241 7.417	99.640 96.821		10.200 10.200	102.200 102.200	Ohm-m Ohm-m	1.007 1.029	1.904 -17.567	
EE /SN /LN	112.580 9.477 214.205	4730.241 5293.988 1417.736	counts counts counts	0.123 0.181 4.086	5.177 100.976 27.042	A V V			
Before S	Survey Verificat	ion							
	Readi Zero	ings Cal		Referer Zero	nces Cal		Resu Gain	lts Offset	
Short .ong	9.282 457.514	99.534 107.030		7.493 106.708	99.615 106.708	Ohm-m Ohm-m	1.021 1.628	-1.982 -67.572	
EE /SN /LN	107.875 11.250 138.625	4570.704 5111.269 1374.056	counts counts counts	0.118 0.215 2.644	5.002 97.491 26.208	A V V			
After Sur	rvey Verificatio	n							
	Read Zero	ings Cal		Refere Zero	nces Cal		Resu Gain	lts Offset	
Short ong	7.701 677.668	99.621 106.711		7.548 106.590	98.604 106.590	Ohm-m Ohm-m	0.991 0.993	-0.081 0.656	
EE /SN /LN	113.117 9.787 215.309	4756.250 5323.424 1425.576	counts counts counts	0.124 0.187 4.107	5.205 101.538 27.191	A V V			
After Sur	rvey Verificatio	n compared to	o Before Surv	ey Calibration	·				
	Zer Before	o After		Ca Before	After				
Short ong	7.493 677.412	7.548 673.391	Ohm-m Ohm-m	99.615 106.708	98.604 106.590	Ohm-m Ohm-m			
			Gamr	na Ray Calibra	ion Report				
T	Serial Number: Fool Model: Performed:	· · ·		OG Apr 29 12:39:0					

Gamma Ray Calibration Report											
 Serial Number: Tool M odel: Performed:	D1 ELOG Fri Apr 29 12:3	39:01 2005									
Calibrator Value:	162	GAPI									
Background Reading: Calibrator Reading:	167.616 722.887	cps cps									
 Sensitivity:	0.291746	GAPI/cps									

Sensitivity. U.291140 GAM/cps Database File: 12104.db WDC/PMW13/run1/Elog Dataset Pathname: Presentation Format: ELOG2 **Dataset Creation:** Fri Jul 01 09:28:54 2005 by Log 6.0 Depth in Feet scaled 1:240 Charted by: -95 S.P. (mV) 5 RLN (Ohm-m) 50 0 RLL3 (Ohm-m) 50 90 0 50 40 Gamma Ray (GAPI) RSN (Ohm-m) 50 RLL3 X10 (Ohm-m) 500 0 RMF (Ohm-m) 50 500 50 RSN (Ohm-m) 50 RLN (Ohm-m) 500 Surface Casing Gamma Ray 50 RLN RLL3 100 S.P. RSN RMF 50 50 0 RLL3 (Ohm-m) S.P. (mV) 5 0 RLN (Ohm-m) -95

90

40

Gamma Ray (GAPI)

0

0

50 50 RSN (Ohm-m)

RMF (Ohm-m)

RSN (Ohm-m)

RLN (Ohm-m)

500

RLL3 X10 (Ohm-m)

50

50

50

500

500

P	A	C	I	F	I	C
S	U	R	V	11	Y	S

LATEROLOG 3 GAMMA RAY

				•	JAIVIIV	IA KA	T	
Job No. 12104	Company	WDC	EXPLOF	RATION	1 & WE	LLS		
	' '							
	Well	PMW-	13					
File No.	Field	WHIT	TIER					
1 110 110	County	LOS A	NGELE	S	State	CA		
Location:				_		Other Serv	ices:	
12482 PUTNAI	M ST.					E-LOG CALIPER		
Sec.	Twp.		Rg	je.		<u></u>	,	
Permanent Datu Log Measured F Drilling Measure	rom G	.L. .L. .L.	0'		ation /e perm. dat	um	K.B. D.F. G.L.	Elevation
Date	<u></u>	7-1-05				<u>-</u>	1.5.5.	
Run Number		ONE				····	-	
Depth Driller		139'						
Depth Logger		139'						
Bottom Logged		138'						
Top Log Interva	<u> </u>	10'						
Casing Driller		9.5" @	18'					
Casing Logger		18'						
Bit Size		9"						
Type Fluid in Ho		BENTO	ONITE					
Density / Viscos	sity	N/A						
pH / Fluid Loss Source of Samp		N/A PIT						
Rm @ Meas. T		7.8 @	775					
Rmf @ Meas. T		8.8 @						
Rmc @ Meas. 1		N/A						
Source of Rmf		MEAS						
Rm @ BHT		N/A						
Time Circulation	Stopped	N/A						
Time Logger on		9:30 AI	M					
Max. Recorded		N/A						
Equipment Num	ber	PS-2						
Location		L.A.						
Recorded By		LAPOF	RTE					

R. HALPERN

Witnessed By

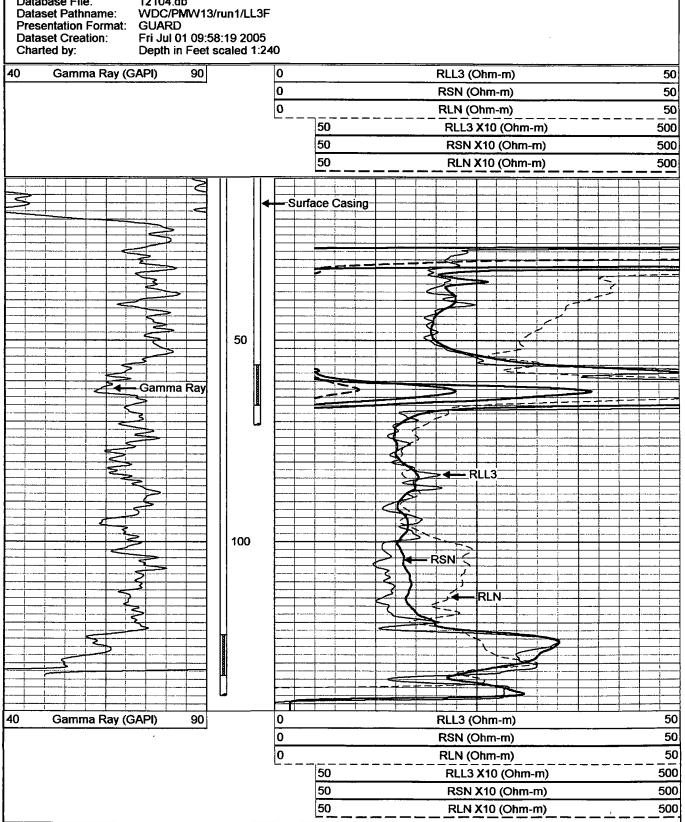
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or wilful negigence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

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Comments

Gamma Ray Calibration Report 13 GROH Fri Apr 29 12:58:38 2005 GAPI/ GAPI 0.931511 31.1611 205.072 192 Background Reading: Calibrator Reading: Calibrator Value: Serial Number: Tool Model: Performed: Sensitivity:

	Simplec Long Guard Calibration Report												
	Serial Number: Tool Model: Performed:	81 M&W Fri Apr 29 12:57:36 2005	j										
	System Reading	Calibration	Reference										
	0.310 0.628 6.054 28.969 56.732	2.500 5.000 50.000 250.000 500.000	Ohm-m										
Dataset Pathname: Presentation Format: Dataset Creation:	12104.db WDC/PMW13/run1/LL3F GUARD Fri Jul 01 09:58:19 2005 Depth in Feet scaled 1:240												



PACIFIC SURVEYS

CALIPER BOREHOLE VOLUMES

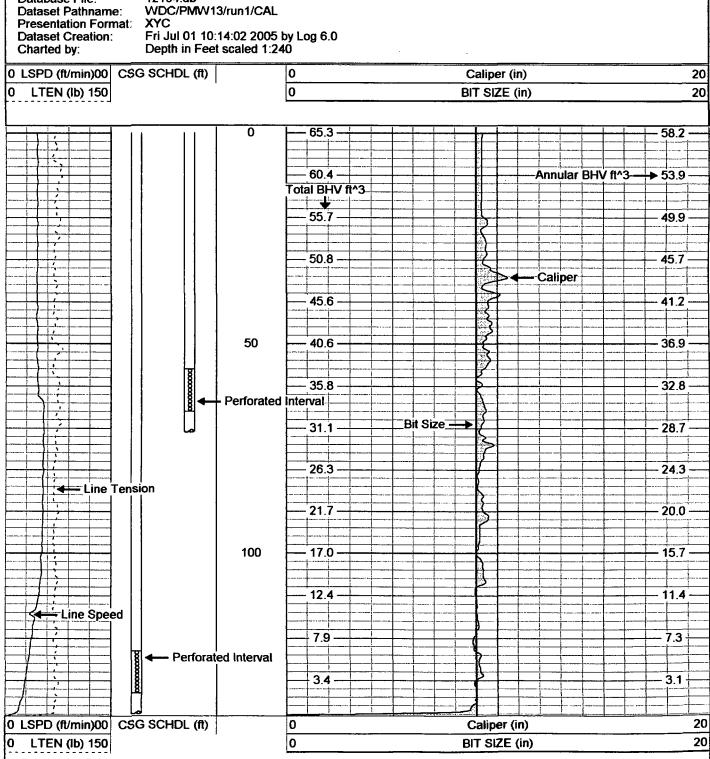
Job No.					·							-	
12104	Co	mpa	ny V	/DC	EXPLO	RAT	101	I & WEI	LLS				
	We	ell	Р	MW.	-13								
EU. M.	Fie	ld	V	/HIT	TIER								
File No.	Со	unty	L	os A	NGELE	ES		State	CA				
Location:		-							Other Serv	ices:		_	
12482 PUTNAM	ST.								GR/LL3 E-LOG				
Sec.		T	wp.		1	Rge.							
Permanent Datum)		G	. L.			Eleva	ation			Elevation		
Log Measured Fro	om		G	.L.	()'		e perm. datı	um	K.B.			
Drilling Measured			G	.L.						K.B. D.F. G.L.			
Date		·		7-1-05	 						•	_	
Run Number				ONE	,		Ť –				t	_	
Depth Driller				139'	·, ·····								
Depth Logger				139'									
Bottom Logged Ir	iterval			138'									
Top Log Interval				0'									
Type Caliper				3 ARM								_	
Type Fluid in Hole					ONITE								
Density / Viscosit				N/A									
Max. Recorded T	emp.			N/A			<u> </u>					_	
pH/Fluid Loss				N/A			<u> </u>						
Time Well Ready				9:30 A			_					_	
Time Logger on E)		9:30 A	M		ـــــ					_	
Equipment Number	er			PS-2			_				·	_	
Location				L.A.	576		-					_	
Recorded By				LAPO			 					_	
Witnessed By	Da	-ahala	Record	K. HA	LPERN		J	Croval	eed/Tubing	Cabadul		_	
Run Number	Bi		From	<u> </u>	To		ize	Graver F Typ		rom	e To	-	
Nui Nui ibei	<u>U</u>	-	FIUIT		10	- 3	126	- I JP	<u> </u>	10111	10	_	
						t		+	 			-	
												-	
												_	
Casing Schedule			Size			pt/Ft			op	ļ	Bottom	_	
Surface String			9.5"			DND		0			18'		
Production String 2.5"								0			71'		
Production String			2.5"		P'	VC)	 	138'	_	
Production String Production String					 -					-		_	
r rougeonon on ny	1												

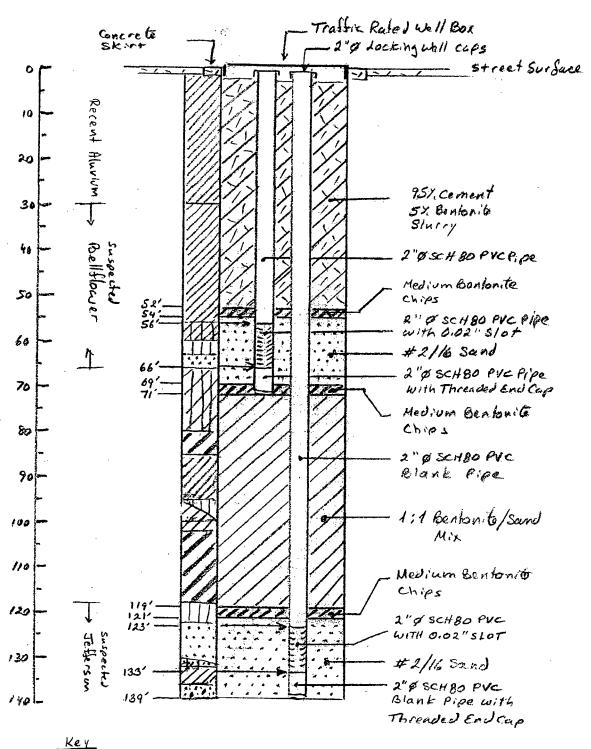
All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general

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Comments

XY Caliper Calibration Report Serial Number: SHORT Tool Model: Comprobe Performed: Fri Jul 01 09:57:34 2005 Small Ring: 8.6 in Large Ring: 18.6 in X Caliper Y Caliper Reading with Small Ring: 929.6 929.6 cps Reading with Large Ring: 1666.6 1666.6 cps 0.0135685 Gain: 0.0135685 Offset: -4.0133 -4.0133 Database File: 12104.db WDC/PMW13/run1/CAL **Dataset Pathname: Presentation Format**: **XYC** Fri Jul 01 10:14:02 2005 by Log 6.0 **Dataset Creation:**





CH - high pleaticity clay

CI - Low elasticity clay

Mircl Silty Clay/clayey Silt

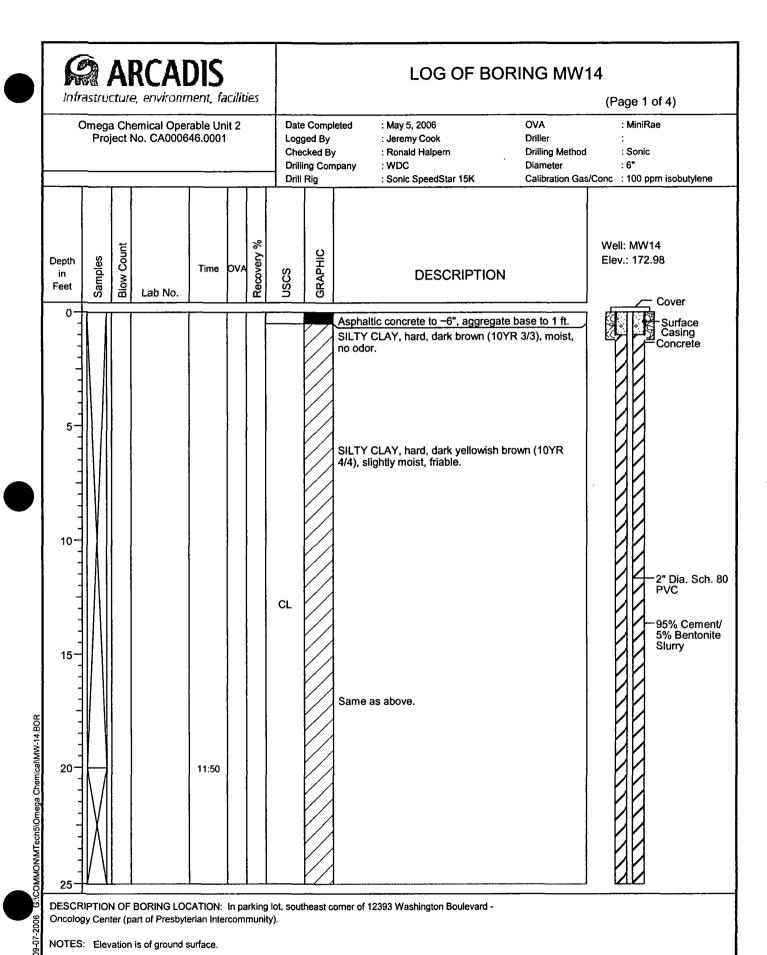
Mi low pleaticity Silt

Sm Silty Sand

Sp poorly Graculd Sand

Su well graded sand

ARCADIS





LOG OF BORING MW14

(Page 2 of 4)

Omega Chemical Operable Unit 2

Date Completed

: May 5, 2006 : Jeremy Cook OVA Driller : MiniRae

Project No. CA000646.0001

Logged By Checked By

: Ronald Halpern

Drilling Method Diameter

: Sonic : 6"

Drilling Company

: WDC

									Rig	: Sonic SpeedStar 15K Calibration	as/Conc : 100 ppm isobutylene		
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	Well: MW14 Elev.: 172.98		
OMINONINA FECTOLOTHEGA CITETURGATINAY-14:DOR	25- 30- 35- 40- 45-				12:45			ML SP-SM		(20-37') SILTY CLAY, medium stiff to stiff, dark yellowish brown (10YR 4/4), moist. (37-42.5'): Low plasticity SILT with CLAY, medium stiff, light olive brown (2.5Y 5/4), slightly moist, lo toughness, moderate to rapid dilatency. (42-46'): Non plastic SILT, soft to medium stiff, ol brown (2.5Y 4/3), slightly moist. (46-55'): Poorly graded SAND with SILT, ~10%-2 sitt, 80-90% very fine sand (<0.5 mm diameter), c (5Y 5/3), slightly moist.	95% Cement/ 5% Bentonite Slurry		

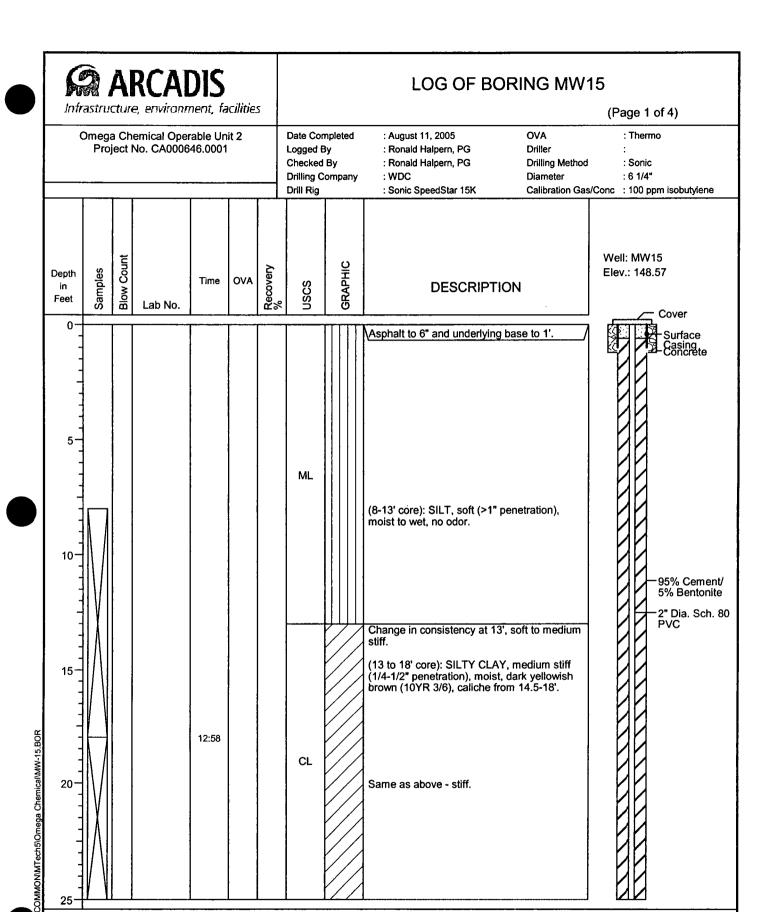
DESCRIPTION OF BORING LOCATION: In parking lot, southeast comer of 12393 Washington Boulevard -Oncology Center (part of Presbyterian Intercommunity).

NOTES: Elevation is of ground surface.

)				RCAI			ies		LOG OF BORING MW14 (Page 3 of 4)							
		Omega	a Ch	emical Oper No. CA0006	able Ur			Logg Chec	Compled By cked Bying Con	eleted : May 5, 2006 OVA : MiniRae : Jeremy Cook Driller : y : Ronald Halpern Drilling Method : Sonic						
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	Well: MW14 Elev.: 172.98						
	50				13:13		Ç	SP-SM		Wet from ~52'. 95% Cement/ 5% Bentonite Slurry 2" Dia. Sch. 80 PVC (55-57'): Poorly graded SAND, ~5% Sitt, 95% fine to						
)	60-			OC2-PMW14 W-0-3	15:40 14:30			SP		wet. (57-58'): Well graded SAND with Gravel, ~20-30% fine and coarse igneous and metamorphic subrounded gravel (max. 55 mm diameter), ~70% fine to coarse subangular sand (max 5 mm diameter), olive brown, wet to saturated. (58-60'): Poorly graded SAND, predominantly fine to medium (~80-90%), ~10-20% coarse sand; olive brown to dark olive brown (2.5Y 3/3 to 4/3), wet. (60-65'): Poorly graded SAND with Gravel: ~15-20% subangular gravel, ~80-85% predominantly fine to medium grained sand (<2 mm) and some coarse (<5 mm), micaceous.						
-2006 G:\COMMON\MTech5\Omega Chemica\\MW-14.BOR	65			OC2-PMW14 W-0-06 Water Recove	5/6/06			SP		(73-75'): Poorly graded SAND with Gravel, ~10-15% subangular to rounded, gravel, ~80-85% poorly graded medium to coarse sand (0.5 mm - 3 mm diameter) subangular quartz feldspar, micaceous (73-75'): Poorly graded SAND with Gravel, ~10-15% subrounded-subangular gravel, 85-90% poorly graded fine to medium sand (0.01-1 mm diameter) well rounded to subrounded; predominantly quartz, plagloclase, and micas.						
2006 G:\CO	DESCR			BORING LOC art of Presbyte			_		neast c	corner of 12393 Washington Boulevard -						

NOTES: Elevation is of ground surface.

				RCAI e, environn			ies		LOG OF BORING MW14 (Page 4 of 4)								
	(emical Oper No. CA0006				Logg Che	Comp ged By cked By ng Con Ria	y	: May 5, 2006 : Jeremy Cook : Ronald Halpem : WDC : Sonic SpeedStar 15K	OVA Driller Drilling M Diamete Calibrati	Method r	: MiniRae :			
	Depth in Feet	Samples Blow Count Time AAO AAO Recovery %						nscs	GRAPHIC		DESCRIPTI	Well: MW14 Elev.: 172.98					
	75—	\times	No	Water Recove	red			SP MH ML-SP		gravel (\fine to r (76-77') wet, oxi (77-80') (0.05-1	: Poorly graded SAND of 10-30 mm diameter), 7(nedium Sand (<2 mm), Plastic SILT with Clay dation stains in Clay. : Nonplastic SILT, bordmm); oxidation staining : SILT, stiff.	0-85% some coarse. y, brown (10YR 4	J/3),		#2/12 Sand 2" Dia. Sch. 80 PVC Blank Medium Chips		
	85 —								<u> </u>	Bottom	of boring at 83'.						
G:\COMMON\MTech5\Omega Chemica\\MW-14.BOR	95																
\COMMON\R	100																
09-07-2006 G:	Oncolo	gy Cen	ter (p	BORING LOG part of Presbyten is of ground s	erian Inte				heast c	corner of 1	2393 Washington Boulevan	d -					



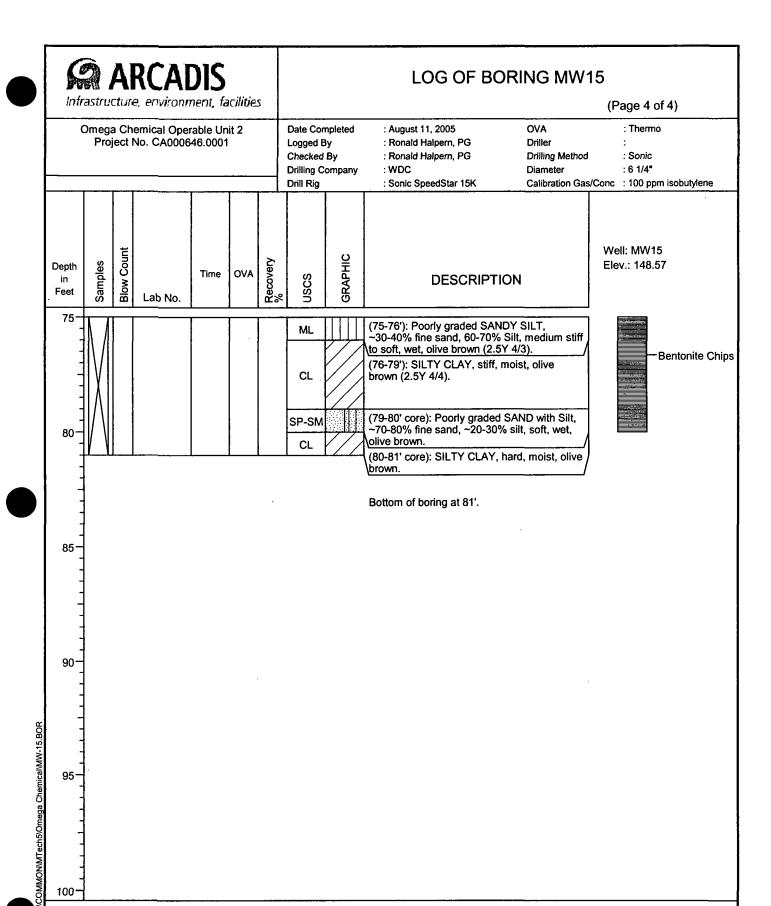


LOG OF BORING MW15

(Page 2 of 4)

	11713	CESTE LE	CELANI	c, environn	icin, id	CHUES	' [(Page	e 2 of 4)
				emical Opera No. CA00064				Date Cor Logged E Checked Drilling C Drill Rig	By By	: August 11, 2005 : Ronald Halpern, PG : Ronald Halpern, PG : WDC : Sonic SpeedStar 15K	OVA Driller Drilling Method Diameter Calibration Gas	: : So : 6	nermo onic 1/4" 00 ppm isobutylene
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	1	Well: N Elev.: 1	
	25							CL		Same as above - very stiff.			
	30							ML		Poorly graded SANDY SILT, wif fine Sand, ~70% Silt w/Clay, ha yellowish brown (10YR 4/6). SILTY CLAY, very stiff, moist, d	rd, moist, dark		
	35—							CL		(10YR 3/3). (36-38' core): Poorly graded SA	ND with SILT,		95% Cement/ 5% Bentonite
	40				13:17			SP-SM SM-ML		85% fine-grained, 15% Silt, moi (10YR 4/3), micaceous, wet at 3 (38-42' core): Poorly graded SIL SAND/SANDY SILT, ~40-60% f ~40-60% Silt, soft, saturated, ol (2.5Y 4/3).	38 feet. .TY fine Sand,	•	2" Dia. Sch. 80 PVC
V-15.BOR	- - - - -	\bigvee		OC2-MW15	13:35			SP-SM		(42-43'): Poorly graded SAND w ~10-20% Silt, 80-90% fine to m saturated, olive brown (2.5Y 4/3 (43-45' Simulprobe): Poorly grad	edium soft, 3).		
COMMONIMTech5\Omega Chemical\MW-15.BOR	45			W-0-03	15:24					SAND-fine, saturated, olive brow			—Bentonite Chips
COMMONIMTech5	50	X		OC2-PMW12 W-0-05	17:10			SP		(48-50'): Poorly graded SAND, - 34% medium to coarse sand (m brown, saturated, subrounded			Sand #1C

	G		ΔI	RCAI	DIS					LOG OF BOF	RING MW	15	
				e, environn		cilitie	5					(Page 3	3 of 4)
		Omega Proj	a Ch ject l	emical Oper No. CA0006	rable Un 46.0001	it 2		Date Cor Logged E Checked Drilling C Drill Rig	By By	: August 11, 2005 : Ronald Halpern, PG : Ronald Halpern, PG : WDC : Sonic SpeedStar 15K	OVA Driller Drilling Method Diameter Calibration Gas	: Ther : : Soni : 6 1/4 /Conc : 100	c
	epth in eet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTIO	N .	Well: MW Elev.: 14	
	50							SP		(50-53.5'): Poorly graded SANI predominantly fine-grained as a yellowish brown (10YR 5/6) to yellowish brown. (53.5-54.4'): Poorly graded SAI predominantly fine (50%), med coarse (25%), saturated, yellow dark yellowish brown (10YR 5/6	above, dark ND, ium (25%), wish brown to		
	55 — - -	$\left \right \left \right $						ML		(54.4-56.8'): SILT, medium stiff light olive brown (2.5Y 5/4), (ho laminated).	f, moist to wet,		
	60-	X		OC2-PMW12 W-0-07	Stop 8/10/05 8/11/05 7:30			SW.		(56.8-61' Simulprobe): Well grafine to coarse, occasional Gravel-subrounded, saturated, (2.5Y 4/4).	ĺ		2" Dia. PVC Sch 80 (0.020"
	65									(61-70' core): Poorly graded SA predominantly fine to lower-end medium-grained (max 1 mm di coarse sand, fine and coarse g mm dia.), light olive brown (2.5	d a.), occasional lravel (max. 30		Slotted Screen) —Sand #1C
ega Chemicanmwy-15.bUr	70-	X		Simulprobe OC2-PMW12 W-0-08	8:15 9:25			SP		(70-72' Simulprobe): Same as a	above.		
INM I ecnolom	- I	\bigvee						ML SP		(72-73' core): SILT, medium sti penetration), wet, olive brown (micaceous.	2.5Ý 4/4),		2" Dia. Sch. 80 PVC Blank
COMMON	75 -	V			<u> </u>		<u></u>	ML		(73-74' core): Poorly graded SA fine-grained, wet, olive brown (micaceous.	AND, 2.5Y 4/3)),		



SAMPLE IDENTIFICATION LOG

SAMPLE I	DENTIFICA	ATION LOC	3				5
Date	Time	Operable Unit	Well Location	Sampled Medium (Water or Soil)	Sample Type ¹ (0 thru 6)	Sequential Sample No.	Remarks
Sample Ty			e; 1 - Field	Duplicate; 2 - I	ield Blank;	3 - Equ	ipment Blank
		rip Blank;		MS/MSD;	6 - Regula	tory Split.	<u></u>
8/10/05		ocz	PMW15		Н	01	Trip 1x home was
	13:04	OC2	PMWIS	<u> </u>	2	02	Field blank 3x40 ml
	15:54	0C2	PMWIS		0	03	CHE 3x40ml Releas
- 1	15145	012	PMWIS	w	3	04	Equip Blank
8/112	17:10	OCZ	PAWIS	w	<u>a</u>	05	@50' 3x40ml(c/4m)
8/11/05	07115	oce	Sin Va	hr	4	06	Trip 1x40ml
	07:30	002	PAULS	w	0	07	C60' 3x 40 ml -sl. cloud
	091,25	ocz	PMWIS	w	0	08	@ 72' 3x 40 ml - clear
							
1,							
							

		RCAI environn			<u>≘</u> s						(P	age 1 of 8)
Omega Proj	ect N	mical Oper o. CA0006	able Ui 46.000	nit 2 1		Logge Check	ed By Compa	:	lune 3, 2005 Ronald Halpem, PG Ronald Halpem, PG WDC GF Star 30	Diamet		: MiniRae : Mark Green : Mud Rotary : 8 3/4" : 100 ppm isobutylene
Depth in Feet S	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC		DESCRIPTION		Well1: MV Well2: MV Well3: MV Elev.: 153	/16B /16C
10			5/27/05 12:00			ML	T T	Off cyclo ~95-98% diam. 1 4/4), mo	one @14'; SAND, poorly of fine to medium-grained mm); dark yellowish brow ist, no odor.	graded:		Surface Casing 95% Cement 5% Bentonite 2" Dia. Sch. PVC Blank PVC Blank

NOTES:



LOG OF BORING MW16

(Page 2 of 8)

•)(111	asขน	ctur	e, environi	nent, i	acınu	E2					(Page 2 of 8)
				emical Ope No. CA0006				Logged Check	ed By Compa	: Ronald Halpern, PG : Ronald Halpern, PG	OVA Driller Drilling Method Diameter Calibration Gas/Cor	: MiniRae : Mark Green : Mud Rotary : 8 3/4" nc : 100 ppm isobutylene
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	Well1: I Well2: I Well3: I Elev.: 1	MW16C
	25	\bigvee			14:29	1.3		SP		Off split spoon @ 30-31.5. CLAYEY to SILTY CLAY; soft, light olive brow	m 1/1/2	95% Cement/ 5% Bentonite
	35-			:	14.20			ML-CL		(2.5Y 5/4), moist, no odor; moderate dilatency, moderate toughness, most to high plasticity. (Off Shaker): Poorly graded SAND v	derate	2" Dia. Sch. 80 PVC Blank
	40				14:58			SP-SM		Silt; ~10-15% Silt, ~85-90% predom fine-grained sand, some medium-gra (max 1 mm diam.), light olive brown 4/3 to 4/4). Same as above, moist to wet, no od Stopped drilling 5/27/05 at 15:15	eined (2.5Y	2" Dia. Sch. 80 PVC Blank 2" Dia. Sch. 80 PVC Blank Bentonite Chips
COMMONIMTech5\Omega Chemical\MW-16.BOR	45 — -				5/31/05 8:40			SP	-	(Off Shaker) 43-47': Poorly graded Spredominantly fine to medium graine 1 mm diam), occasional fine gravel (max diam 7 mm); brown.	ed (max (<1%;	—Sand #2/16
(COMMON/MTech5\0	50-							SP-SM		with Silt-Silty Sand: ~5-15% silt, 85-predominantly very fine to fine sand; brown.	95% 日日	2" Dia. PVC Sch 80 (0.020" Slotted Screen

In the greenbelt on the east side of Dice Road, approximately 85 feet north of the centerline intersection with Altamar Place.

NOTES:

			RCAI e, environn			2 S					(P	age 3 of 8)
(Omega Pro	a Ch ject	emical Opei No. CA0006	rable U 46.000	nit 2 1		Logge Check	ed By Compa	: Ronald Halpern, PG : Ronald Halpern, PG	OVA Driller Drilling I Diamete Calibrat	er	: MiniRae : Mark Green : Mud Rotary : 8 3/4" : 100 ppm isobutyle
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well1: MV Well2: MV Well3: MV Elev.: 153	V16B V16C
50	M		No Water Recovery	9:04	1.4	100	SW		50.25-50.75 (off split spoon). V SAND with Silt: ~10-15% silt, ~i fine to coarse sand (max 5 mm occasional fine gravel; dark yell brown (10YR 4/4) to brown (10Y saturated.	85-90% dia.), owish		
55-			OC2-PMW16 W-0-04	12:56			GP SP		At 50.75-51.5 (off split spoon); medium stiff, yellowish brown (1 to dark olive brown (2.5Y 3/3), vodor. At 53'; Poorly graded GRAVEL, to medium sand, ~85% fine subgradeous gravel, ~5% silt. 56-57 (off split spoon). Poorly (SAND, fine to medium-grained mm dia.); olive (5Y 4/4), satural	vet, no ~10% fine prounded, graded (max ~0.75		2" Dia. S PVC with Slotted S —Sand #2/
60			OC2-PMW16 W-0-06	14:30					Non plastic SILT; medium stiff, (2.5Y 4/3), wet; occasional subr fine gravel.	olive brown ounded		2" Dia. S 2" Dia. S PVC Blai
65												2" Dia. S PVC Blai
70-	\square		OC2-PMW16 W-0-07 OC2-PMW16 W-1-08	15:50			ML		70.5-71.5' (Off split spoon): No SILT, soft to medium stiff, olive (2.5Y 4/3), moist, bands of iron staining; micaceous.	brown		Mix Sano

In the greenbelt on the east side of Dice Road, approximately 85 feet north of the centerline intersection with Altamar Place.

NOTES:

75

)				RCAI e, environn			⇒			LOG OF BORING	MW16 (Page 4 of 8)
		Omega	a Ch	emical Oper No. CA0006	able U	nit 2		Date C Logged Checke Drilling Drill Rie	ed By Compa	: Ronald Halpern, PG Driller : Ronald Halpern, PG Drilling iny : WDC Diame	: MiniRae : Mark Green : Mud Rotary
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	USCS	GRAPHIC	DESCRIPTION	Well1: MW16A Well2: MW16B Well3: MW16C Elev.: 153.19
	75— 			OC2-PMW16 W-0-09	17:35			ML		80.5-81.5' (Off split spoon): SILT with CLAY; medium stiff, light olive brown (2.5Y 5/4), wet; some iron oxide banding, micaceous. Increased CLAY content.	1:1 Bentonite Mix Sand #3 2" Dia. Sch. 80 PVC Blank
G:\COMMON\MTech5\Omega Chemica\\MW-16.BOR	90			OC2-PMW16 W-0-10	6/1/05 8:40			SM		Stopped drilling 5/31/05 at 18:00. Resumed 6/1/05. Off split spoon. Poorly graded SILTY SAND, ~10-15% silt, ~75% predominantly fine to medium grained (max 1 mm dia.), occasional (~3-5%) coarse sand (~4 mm dia.) and ~5% fine gravel (max dia. 30 mm); olive brown (2.5Y 4/3), saturated. Off shaker. Same as above. ~5% coarse sand, 5% fine gravel. Increasing grain size - grades into well graded SAND, fine to coarse (max 5 mm), occasional fine gravel (max 20 mm), dark grayish brown (10YR 4/2), saturated,	2" Dia. Sch. 80 PVC Blank Control of the control o
S:\COMMC	100	reenho	lt on	the east side (of Dice 5	Poad a	norovin	nately 85	feet no	subrounded grains. Change in soil type observed at 100.5.	

In the greenbelt on the east side of Dice Road, approximately 85 feet north of the centerline intersection with Altamar Place.

NOTES:

ARCADIS

LOG OF BORING MW16

Inf	rastrud	ture	e, environn	nent, f	acilitie	es					(P	age 5	of 8)
			emical Opei No. CA0006				Logge Check	ed By Compa	: Ronald Halpern, PG : Ronald Halpern, PG iny : WDC	OVA Driller Drilling M Diamete Calibrati	r	: MiniR : Mark : Mud F : 8 3/4" : 100 p	Green Rotary
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well1: MV Well2: MV Well3: MV Elev.: 153	V16B V16C	
100-	M		No Water Recovery Mud	9:50	0.2		CL		(Off split spoon): SILTY CLAY; stiff, brown (10YR 4/3), moist, no odor; occasional yellowish red (5YR 4/4), staining, (possible iron oxide), high toughness, moderate plastic, no dilat positive ribbon test. (Off shaker and mud pan), CLAYEY SAND: well graded, ~35-45% clay, ~45-55% fine to coarse sand (max 5 dia.), ~10% fine gravel (max 15 to 18	mm	Received.		- 1:1 Bentonite Mix Sand #3 - Bentonite Chips - 2" Dia. Sch. 80 PVC Blank
110-			No Water Recovery	12:00	0.1		sc		dia.); very dense; olive brown clay masaturated; sand is subrounded, fine g platey and subangular of igneous original of the subangular of igneous original of the subangular of igneous original original or subangular of igneous original or subangular or	gravel gin.			-2" Dia. PVC Sch 80 (0.020" Slotted Screen Sand #3
115-			No Water Recovery Mud	13:35	0.1		GP GW	y 0 0	GRAVEL with Sand: ~60% fine grave (max 18 mm dia.) ~40% fine to coars sand (max 5 mm dia.), of igneous ori subrounded to subangular. Well graded GRAVEL with Sand: ~60 fine and coarse gravel (max 30 mm) fine to coarse sand.	gin,			−2" Dia. Sch. 80 PVC Blank

114-114.25' (Off split spoon): Non plastic

SILT; medium stiff, olive brown, wet. 120-ML 14:40 0.6 CLAYEY SILT: ~60-90% silt, 10-40% clay, light olive brown (2.5Y 5/4), moist, no OC2-PMW16 W-0-12 odor; brittle, low toughness, low to moderate plasticity, rapid to moderate dilatency, sticky.

Bentonite Chips 1:1 Bentonite Mix Sand #3

2" Dia. Sump

In the greenbelt on the east side of Dice Road, approximately 85 feet north of the centerline intersection with Altamar Place.

NOTES:

125

Elevation = ground surface; A = Shallow, B = Intermediate, C = Deep Well.

Ome	ega Ch	e, environn nemical Ope No. CA0006	rable U	nit 2		Logge Check	ed By Compa	: Ronald Halpern, PG : Ronald Halpern, PG	OVA : Mir Driller : Ma	
Depth de la constant	Blow Count	Lab No.	Time	OVA	Recovery %		GRAPHIC	DESCRIPTION	Well1: MW16A Well2: MW16E Well3: MW16C Elev.: 153.19	
130		OC2-PMW16 W-0-14	16:20 16:40 6/2/05 7:00	0.2		ML GP-GC		(off shaker). Same as above. 130-131.5' (Off split spoon): SILT; olive brown (2.5Y 4/4), moist; mica borderline very fine sand, rolls, low toughness, rapid dilatency, low pla Set Simulprobe at 16:40 at 132-13 Stopped drilling 6/1/05. Resume 6 132-133.5 (Off split spoon). Poorly GRAVEL with Clay: ~80-90% fine subrounded to subangular gravel (mm dia.), occasional coarse grave 25 mm dia.) in an olive brown (2.5' silty clay matrix; stiff moist, no odo of igneous origin. From133.5 - SILT, stiff, olive brown 4/3), moist, no odor.	sticity. 4'. //2/05. graded max 20 I (max Y 4/3) r, gravel	— 1:1 Benton Sand #3 M
140		OC2-PMW16 W-0-15	7:15 8:30			SP		140.5-141.5: Poorly graded SAND, fine-grained (max dia. ~0.1-0.2 mm brown (2.5Y 6/3), moist, no odor.	n); olive	2" Dia. Sch
150						SP		~10-15% fine to coarse sand in silt matrix; olive brown (2.5Y 4/3). 149' Off mud pan: Poorly graded S fine to medium (max 2 mm dia.), subrounded.	y clay	Bentonite (Sand #2/10 Carlo Bo (0.0 Siotted Sci

1			RCAI						LOG OF BORI	ING I	MW16		
	Omega	a Ch	e, <i>environn</i> emical Oper No. CA0006	able U	nit 2	<u></u>	Logge Check	ed By Compa	: Ronald Halpem, PG : Ronald Halpem, PG	OVA Driller Drilling I Diamete	Method er	age 7 : MiniR : Mark : Mud F : 8 3/4" : 100 p	ae Green Rotary
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well1: MW Well2: MW Well3: MW Elev.: 153.	16B 16C	
150-	M		No Water Recovery	11:36	0.1		GP		151-151.5 (off split spoon): Poorly g GRAVEL: predominantly fine (max 1 dia.), occasional coarse (max 25 mn subrounded igneous source (plag, m	19 mm n dia.),			
155-			No Water Recovery	14:00			SP		minerals). 151.5 to 152 (off split spoon): Poorly graded SAND: predominantly fine gr (~10-15% medium <1 mm dia.), den olive brown (2.5Y 4/4), wet. 154-155' (off split spoon): Poorly gra SAND; fine to medium grained (max dia.), olive brown (2.5Y 4/4) to light obrown (2.5Y 5/4), wet.	rained ise, ided (1 mm			−2" Dia. Sch. 80 PVC with (0.020
160			OC2-PMW16 W-0-16	15:50	0.1		SP-SM		At 160-162 off split spoon. Same as above. ~10-20% silt, 80-90% fine to medium sand (max 2 mm dia.), dark grayish brown (2.5Y 4/2), wet.)			Slotted Screen
165 — - - -					:								−2" Dia. Sump
COMMONWITECH510mega Chemical/MW-16.BOR			OC2-PMW16 W-0-19	16:45 6/3/05 7:15			CL		Driller indicates change in soil type a based on drilling conditions/clay on Change also observed on shaker. Stopped drilling 6/2/05 at 16:45 at 1: Simulprobe set overnight 170-172 (off split spoon); SILTY CL/very stiff, dark yellowish brown (10Y 4/4 to 4/6), moist, light bluish gray (0 8/1) artifacts, (marine?); some black artifacts-possibly decayed organic; moderate to high toughness, no dila moderate to high plasticity, low liquid high dry strength.	drill bit. 70'. AY, R Gley 2 .ish tency,			a. = amp
7.			the east side o	of Dice F	Road, a	pproxin	nately 85	o feet no	rth of the centerline intersection				

NOTES:

Intrastru	ARCA Icture, environ							(Page 8 of 8)
Omeg Pro	a Chemical Ope oject No. CA000	erable Un 646.0001	nit 2	Logg Chec	Complete ed By ked By ng Compa	: Ronald Halpern, PG : Ronald Halpern, PG	OVA Driller Drilling Methor Diameter Calibration Co	: MiniRae : Mark Green
Depth sold we S	Blow Count Count Lab No.	Time	AVO Recovery	SOSU %	GRAPHIC	DESCRIPTION	w w	rell1: MW16A rell2: MW16B rell3: MW16C rev.: 153.19
175		8:17		CL		Same as above, very stiff to hard, s brown (7.5YR 5/6-4/6), slightly mois Bottom of boring at 182'.	strong st.	—Sand #2/1
185-				·				
190								
195								
200-						orth of the centerline intersection		

PMW16

SAMPLE IDENTIFICATION LOG

AMPLE ID	<u>PENTIFICA</u>	TION LOG	P.	70100 10				
Date	Time	Operable Unit	Well Location	Sampled Medium (Water or Soil)	Sample Type! (0 thru 6)	Sequential Sample No.		
imple Ty	pe: 0 - Prli	mary Samp		d Duplicate; 2			Equipment Blank	
77 7		rip Blank;		MS/MSD;	T .	tory Split.		
5/3/105	7:30	OC2	PMW16	W	4	01	Trip	
	730	OCZ	PAWIL	W	2	<u> 02</u>	Es Field Blank	
		-oct	Provide			03	dry	
\longrightarrow	8:40	007	PMW16	W	3	03	Eguip blank - Simulorde	e sx40m
\longrightarrow	12156	002	BMW16	W_	0	04	SX 40 NI WOAC57'- Silty.	
\longrightarrow		00.7	PMW16	ಭ	0	05	So. / Sample 56-56,5	
	14:30	002	PMW16	W	B	06	1x40 m) 10A @ 62'	
	15:50	0C Z	pmw16	W	B	07	3x 40m VOA @ 72'	
	15.50	oc z	PMW16	u	1	08	Dup 3x40Ml VOA @72' St Sil	+,
	,				ļ			, .
\rightarrow	15:40	OC 7	BMW23	W	BM2	02	Any way south in Binz	
	17:10	ocz	CW MS3	L.J.	B.n1	02	water accordated in Bir 1	
			_					
Ψ.	17:35	ocz	PMW16	W	6	09	x40ml VOA e821	
6/1/05	8:40	ØC: 2.	raw 16	W	O	10	6x40ml 40A @92' Very	Silty
		OC 7	PMW16	W	4		Trie (1x 40 mil 1019)	/
+	14:40	OC 2	PMW16	W	0	12.	Trip (1x 40ml von) 0 123° 2x 40ml von - cky	y (not
0/2/05	08:00	ocz	PMW16	W	4	13	Trip	brus
	08:08	nc?	PMW16	<u> </u>	0	14	CIBB' YX YOMIVOA Clea	1
	09:40	OC 2	PMWH	l~	0	15	@142 5x40ml VOX 5:14	
	15:50	062	PMW16	W	0		@162' 3 Y 40 ml you sill	
	12:50	0(2	rnw16		0	/ว	@ 161-161,5 13"x6" ss take	•
6/3/05	0700	ocr	PMW16	W	4	18	Trie	
	0715	oce	CMW16	ω	0	19	0172 4 x 40 ml VOA Very s	5:157
				···			<u>'</u>	
				· · · · · · · · · · · · · · · · · · ·				
					/			
		-						
1					, ,			
								

Field Duplicales - every 10th primary sample (or 10x.)

Field Blank - @ first sample location then 10). I primary samples

Equip Blank - once per sampling event

This Blank - every cooler.

Page ___

PACIFIC SURVEYS

ELECTRIC LOG LATEROLOG 3 GAMMA-RAY

				GAIVIIV	IA-KA	Ť
Job No. 12053	Company	WDC FX	(PLORAT	ION & WE	LLS	
,2000	1					
	Well	MW-16				
	Field	SANTA I	FE SPRI	NGS		
	County	LOS AN	GLELES	State	CA	
Location:					Other Serv	ices:
OMEGA CHEN ADJACENT T	MICAL OU-2 O 9028 DICE ROAD)			LL3/GR CALIPER	
Sec.	Twp.		Rge.			
Permanent Datu Log Measured F Drilling Measure	rom G.		0'	Elevation above perm. dat	um	Elevation K.B. D.F. G.L.
Date		06/03/05				J.C.L.
Run Number		ONE				
Depth Driller		181'		 		· · · · · · · · · · · · · · · · · · ·
Depth Logger		181'				
Bottom Logged	Interval	180'				·····
Top Log Interva		10'				······
Casing Driller		9.5" @ 20'				
Casing Logger		20'				
Bit Size		8.5"				
Type Fluid in Ho	ole	BENTONI	TE			
Density / Viscos	sity	N/A				
pH / Fluid Loss		N/A				
Source of Samp		PIT				
Rm @ Meas. T	,	7.4 @ 77 F		ļ		
Rmf @ Meas. T		8.4 @ 77 F	: 			
Rmc @ Meas. 1		N/A				
Source of Rmf	/ Rmc	MEAS				
Rm @ BHT	····	N/A				
Time Circulation		09:00				
Time Logger on		09:50		 		
Max. Recorded		N/A				·····
Equipment Num	ber	PS-1		-		
Location	<u> </u>	L.A.				
Recorded By		T. HOWAF		ļ		
Witnessed By		R. HALPE	RN			

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

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Comments

ELOG Calibration Report

<u>о</u>та

Serial: Model:

Model.

Snop Calibration Performed: **Before Survey Verification Performed:** After Survey Verification Performed:

SUN UCT U3 15:58:27 2004 Fri Mar 28 18:39:54 2003 Tue Nov 20 13:45:24 2001

Shop Calibration

ero	Cal		Zero	<u> </u>			
			2 0 10	Cal		Gain	Offset
8.338	99.830		10.200	102.200	Ohm-m	1.006	1.815
4.448	94.107		10.200	102.200	Ohm-m	1.026	-21.000
133.593	6285.944	counts	0.146	6.879	Α		
89.009	7086.491	counts	1.698	135.166	V		
130.741	1836.815	counts	2.494	35.035	V		
	4.448 133.593 89.009	4.448 94.107 33.593 6285.944 89.009 7086.491	4.448 94.107 33.593 6285.944 counts 89.009 7086.491 counts	4.448 94.107 10.200 133.593 6285.944 counts 0.146 89.009 7086.491 counts 1.698	4.448 94.107 10.200 102.200 133.593 6285.944 counts 0.146 6.879 89.009 7086.491 counts 1.698 135.166	4.448 94.107 10.200 102.200 Ohm-m 133.593 6285.944 counts 0.146 6.879 A 89.009 7086.491 counts 1.698 135.166 V	4.448 94.107 10.200 102.200 Ohm-m 1.026 133.593 6285.944 counts 0.146 6.879 A 89.009 7086.491 counts 1.698 135.166 V

Before Survey Verification

	Read	ings		Referer	nces		Resu	ılts
	Zero	Cal		Zero	Cal		Gain	Offset
Short Long	255.170 1150.040	100.412 103.869		46.444 103.264	100.411 103.264	Ohm-m Ohm-m	-0.349 0.219	135.426 80.559
IEE VSN VLN	140.620 403.139 454.231	6475.111 7304.796 1889.074	counts counts counts	0.154 7.689 8.664	7.086 139.330 36.032	A V V		

After Survey Verification

	Read	ings		Refere	nces		Resi	ılts
	Zero	Cal		Zero	Cal		Gain	Offset
Short	0.000	99.861		0.000	99.853	Ohm-m	1.000	0.000
Long	0.000	102.069		102.055	102.055	Ohm-m	1.000	0.000
IEE	129.370	6528.851	counts	0.142	7.145	Α		
VSN	142.833	7325.000	counts	2.724	139.715	V		
VIN	114 778	1871 738	counts	2 189	35 701	V		

After Survey Verification compared to Before Survey Calibration

	Zer	0		Ca	Ì	
	Before	After		Before	After	
Short Long	46.444 331.945	0.000	Ohm-m Ohm-m	100.411 103.264	99.853 102.055	Ohm-m Ohm-m

Gamma Ray Calibration Report

Serial Number: Tool Model: Performed:	D1 ELOG Mon Jan 26 16	S:20:05 2004
Calibrator Value:	162	GAPI
Background Reading: Calibrator Reading:	172.547 717.938	cps cps
Sensitivity:	0.297034	GAPI/cps

atabase File: ataset Pathname: 12053.db

Presentation Format:

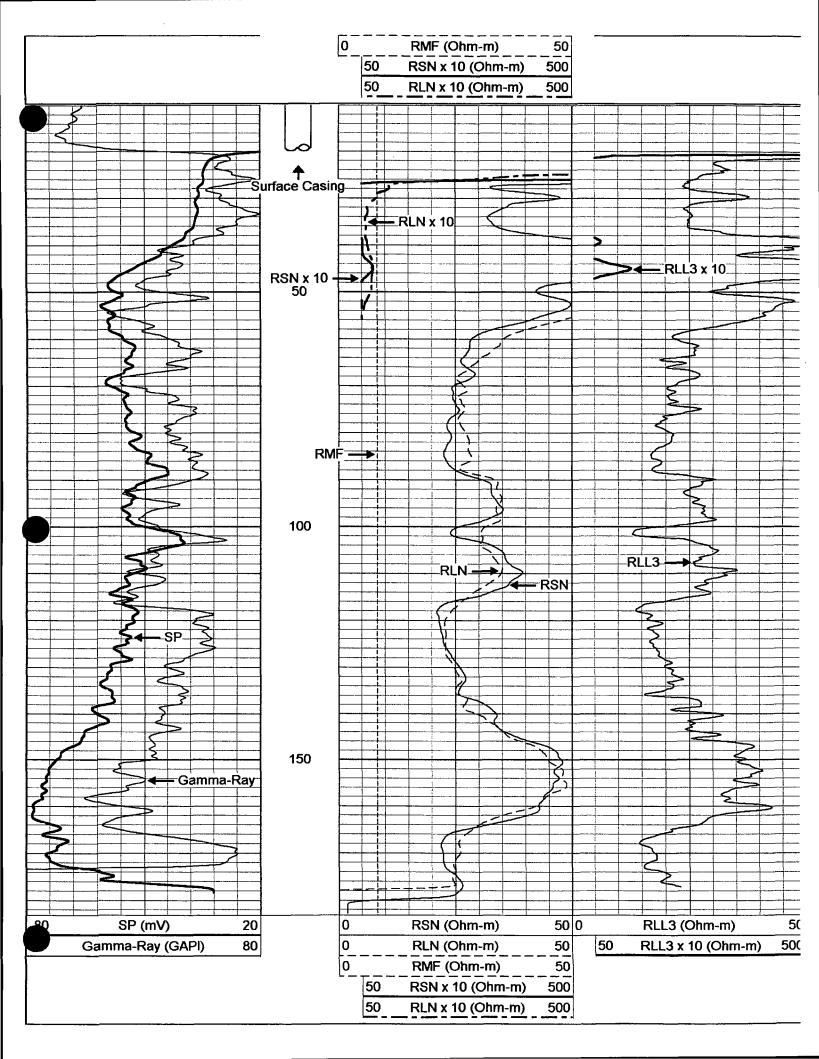
ELOG_UP ELOG

Dataset Creation:

Fri Jun 03 10:00:27 2005 by Log Warrior Version 6.6 Depth in Feet scaled 1:240

Charted by:

-80	SP (mV)	20	0	RSN (Ohm-m)	50 0		RLL3 (Ohm-m)	50
30	Gamma-Ray (GAPI)	80	0	RLN (Ohm-m)	50	50	RLL3 x 10 (Ohm-m)	500



PALIFIC SURVEYS

LATEROLOG 3 GAMMA-RAY

Job No.						· · · · · · · · · · · · · · · · · · ·
12053	Company	WDC EX	PLORATI	ON & WEL	LS	
	Well	MW-16				
	Field	SANTA F	E SPRIN	GS		
	Country	LOS ANG	I EL EC	Ctata	CA	
	County	LOS ANG	ILELES	State	CA	
Location:					Other Servi	ces:
OMEGA CHEMI ADJACENT TO	ICAL OU-2 9028 DICE ROAD				ELOG/GR CALIPER	
Sec.	Twp.		Rge.			
Permanent Datum	n G.l			Elevation		Elevation
Log Measured Fr)'	above perm. datu	ım	<u>қ</u> . <u>в</u> .
Drilling Measured	From G.l					K.B. D.F. G.L.
Date		06/03/05				
Run Number		ONE				
Depth Driller		181'				
Depth Logger		181'				
Bottom Logged in	nterval	180'				
Top Log Interval		10'				
Casing Driller	· · · · · · · · · · · · · · · · · · ·	9.5" @ 20'				
Casing Logger	-	20'				
Bit Size		8.5"				
Type Fluid in Hole	ð	BENTONIT	E			
Density / Viscosit	y	N/A	T			
pH / Fluid Loss	•	N/A				
Source of Sample	е	PIT				
Rm @ Meas. Te	mp	7.4 @ 77 F				
Rmf @ Meas. Te	emp	8.4 @ 77 F				
Rmc @ Meas. Te	emp	N/A				
Source of Rmf /	Rmc	MEAS			-	
Rm @ BHT		N/A				
Time Circulation	Stopped	09:00				
Time Logger on E	3ottom	09:50				
Max. Recorded T	emperature	N/A				
Equipment Numb	er	PS-1				
Location		L.A.				
Recorded By		T. HOWARI)			

R. HALPERN

Witnessed By

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

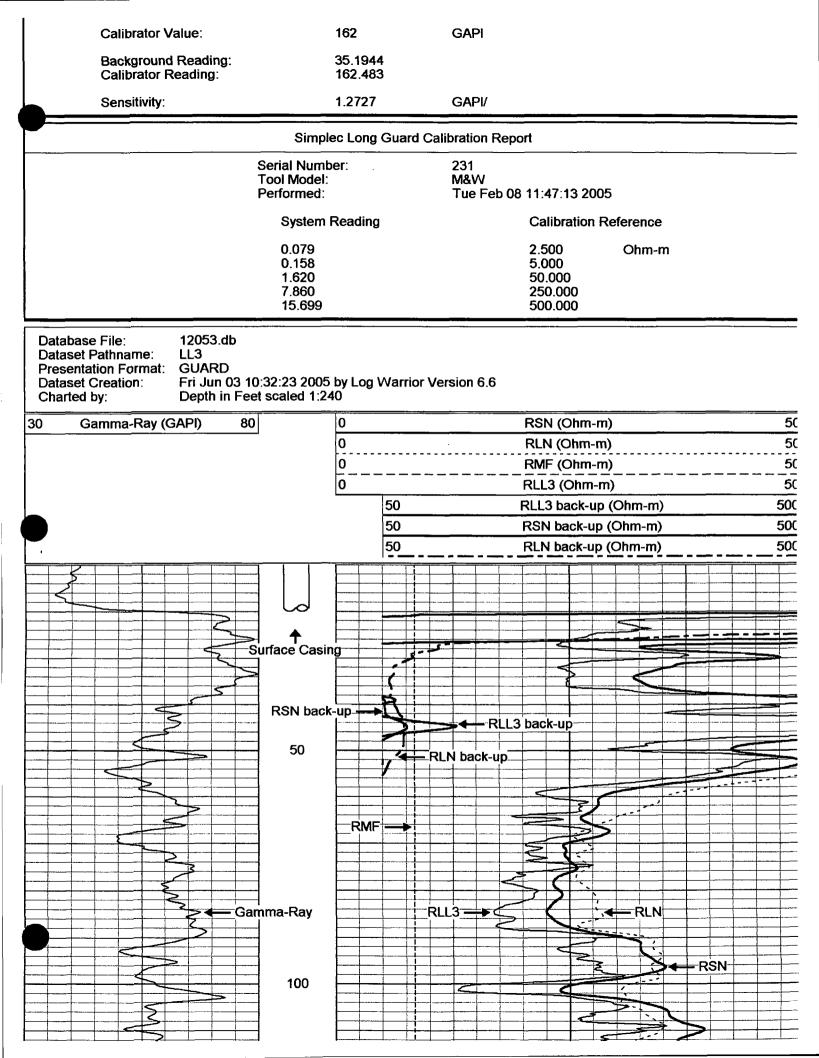
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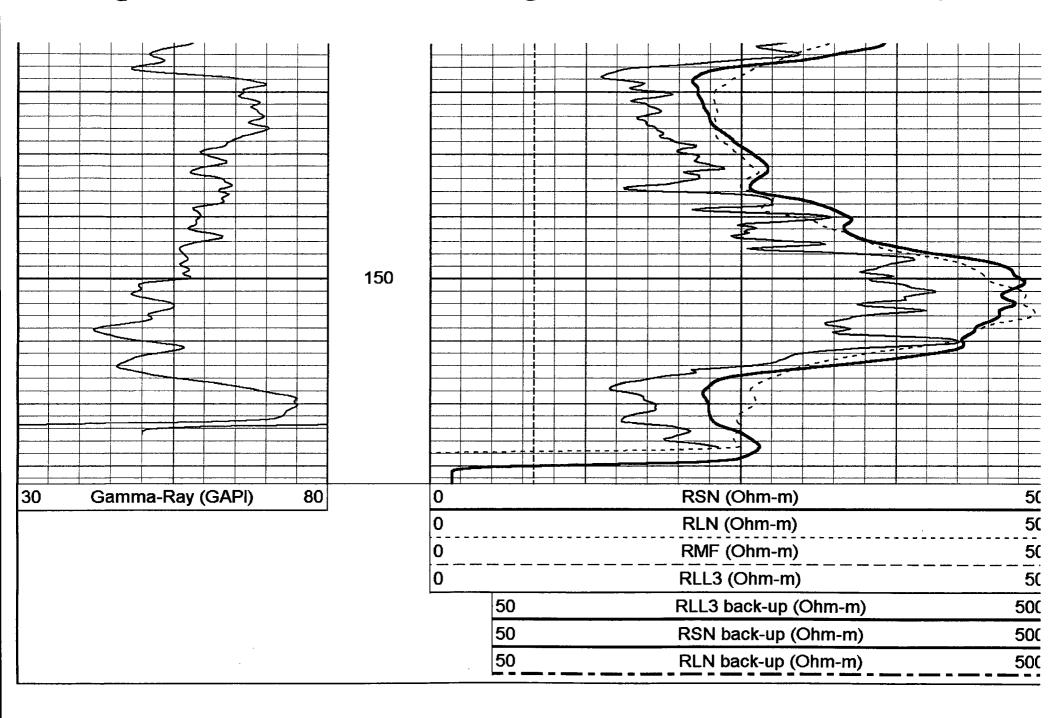
Comments

Gamma Ray Calibration Report

Serial Number: Tool Model: Performed:

13 GROH Mon Jan 26 16:29:15 2004





PALIFIC **SURVEYS**

Production String

CALIPER BOREHOLE VOLUMES

						_ •				•	
Job No.											
12053	Co	mpa	any V	VDC	EXPLO	RAT	ION	I & WE	LLS		
	W	ell	Ν	1 W-1	6						
	Fie	eld	S	ANT	A FE SI	PRIN	IGS	;			
	Co	unt	y L	os A	NGLEL	.ES		State	CA		
Location:	L								Other Serv	rices:	
OMEGA CHEMI ADJACENT TO			ROAD						LL3/GR ELOG/GR		
Sec.		-	Гwр.		F	≀ge.					
Permanent Datum	1		G	.L.			Eleva	ation	•		Elevation
Log Measured Fr	om			.L.	0'		abov	e perm. dati	um	K.B.	
Drilling Measured				L.	_			•		K.B. D.F. G.L.	
Date				06/03/	05		T			10.2.	
Run Number				ONE							
Depth Driller		-		181'							
Depth Logger				181'							· · · · · · · · · · · · · · · · · · ·
Bottom Logged I	nterval]		180'							
Top Log Interval				10'							
Type Caliper				3-ARM							
Type Fluid in Hole	₿			BENT	ONITE						
Density / Viscosit	У			34							
Max. Recorded T	emp.			N/A							
pH/Fluid Loss				N/A							
Time Well Ready				09:45			<u> </u>				
Time Logger on E		1		09:50							
Equipment Numb	er			PS-1							
Location				L.A.							
Recorded By				T. HO							
Witnessed By				R. HAI	PERN					<u> </u>	
Run Number			Record			_			eed/Tubing		
ONE	8.9 8.9		From 0'		To 181'		ize	Тур	e 1	From	То
ONE	0.,				101						+
			L								
											
Casing Schd.			Size		Wg	t/Ft		To	ор		Bottom
Surface String]			Į	
Production String			2.5" OD		SCH 8])'	ļ	65'
Production String			2.5" OD			0 PVC)'	 	121'
Production String	1		2.5" OD		SCH 8	0 PVC		()'		169'

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred o sustained by any or our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

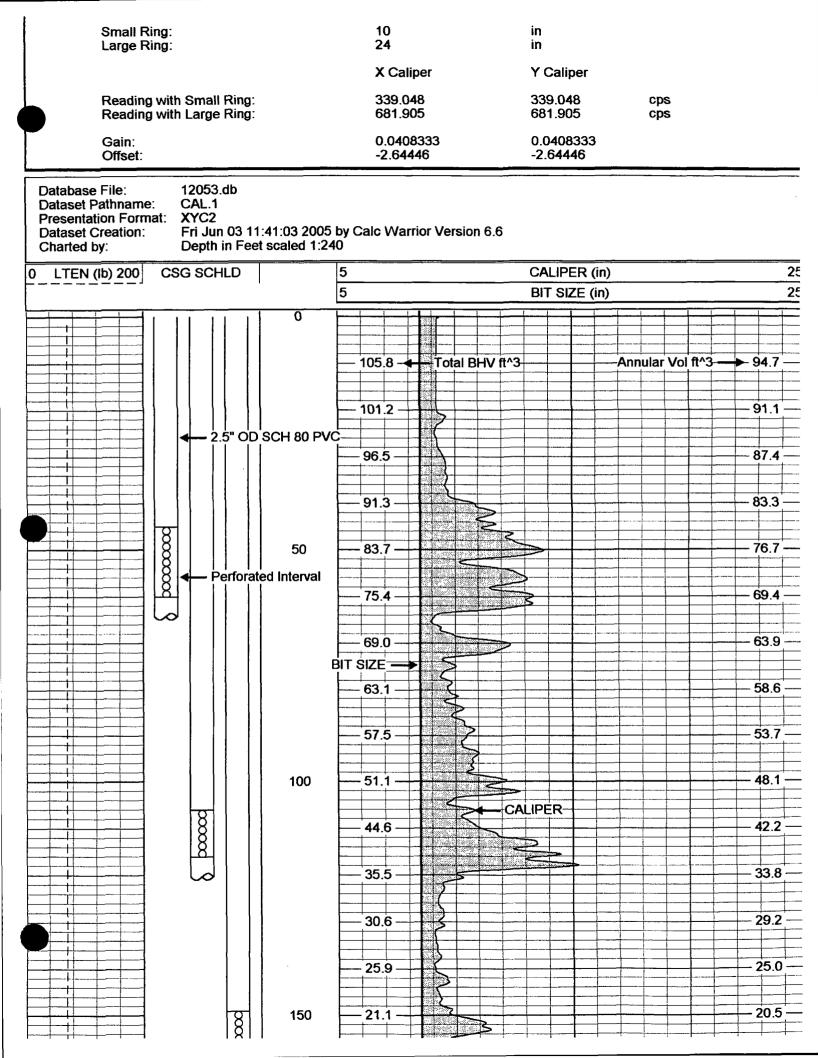
<<< Fold Here >>>

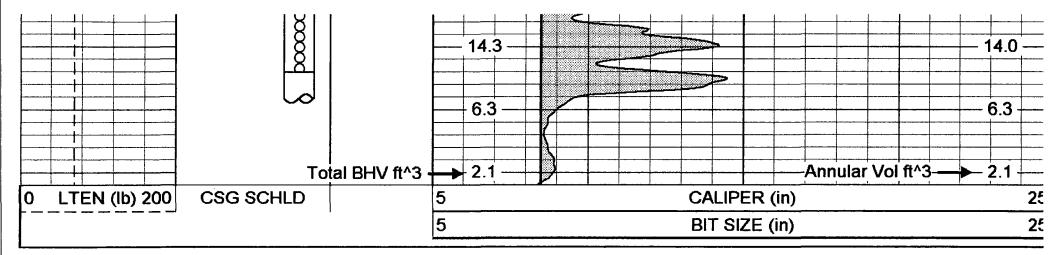
Comments

XY Caliper Calibration Report

Medium Comprobe Fri Oct 15 17:58:55 2004

Serial Number: Tool Model: Performed:





)
SUBJECT:		

BY: DATE:

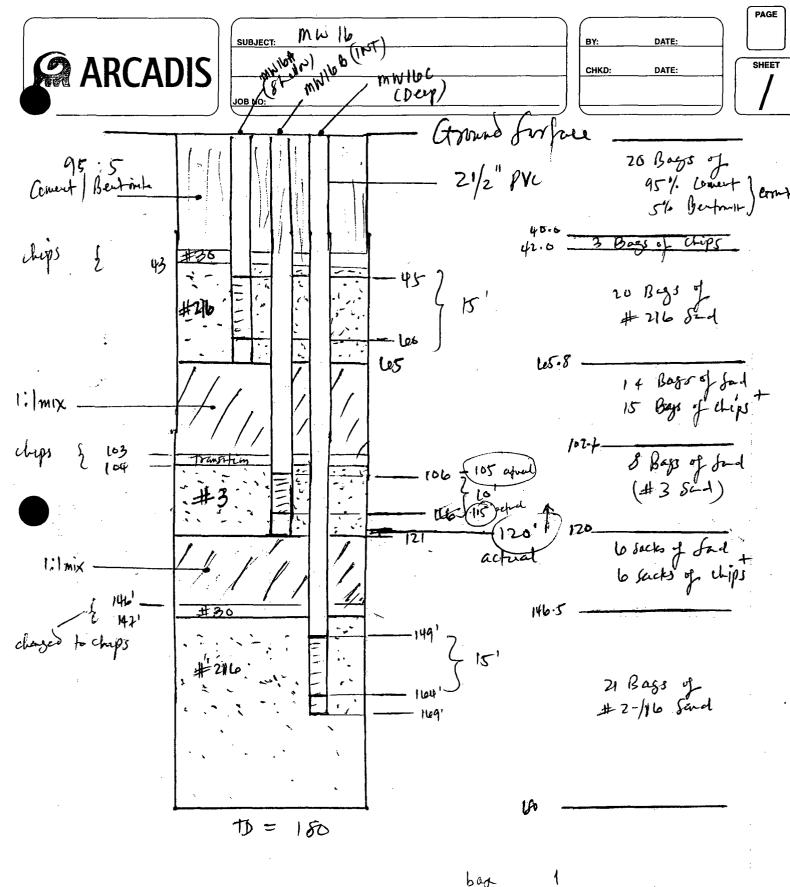
CHKD: DATE:

CHKD: DATE:

Nell design details

2. Intermediate well: MW 16B

3. Shallow well: MWILEA



Black 45+110+150=305+15=320gr Scrum 15+10+15=90gr Enders 3 Louling (45) 3

AGM Form 30 12-01



LOG OF BORING MW17

(Page 1 of 8)

Date Completed : June 28, 2005 OVA : MiniRae Omega Chemical Operable Unit 2 Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller : Steve, Joe, Daniel Checked By : Ronald Halpem, PG **Drilling Method** : Simulprobe/Split Spoon **Drilling Company** : WDC : 8 3/4 Diameter Drill Rig : GF Star30 Mud Rotary Calibration Gas/Conc : 100 ppm isobutylene Well1: MW17A Well2: MW17B Well3: MW17C Blow Count GRAPHIC Recovery Elev.: 159.42 Depth Time OVA USCS DESCRIPTION Feet Lab No. Cover 0 Unpaved soil Surface Casing 5 CL (Off cylcone): SILTY CLAY, stiff, brown (10YR 4/3), slightly moist, no odor. 10 (Off cyclone): SILTY CIAY, stiff, dark yellowish brown (10YR 4/6), dry to slightly moist, ~3-5% fine sand. 95% Cement/ 5% Bentonite 2" Dia Sch. 80 PVC Blank (Off cyclone): Poorly graded SAND/SILT, very fine-grained sand, light yellowish brown (2.5Y 6/4), dry to slightly moist. 15 SP-ML COMMON\MTech5\Omega Chemical\MW-17.BOR 20 (Off mud return): Poorly graded SAND, predominantly fine to medium grained, ~5-10% coarse (3-4 mm dia.) SP 25

Boring location on southwest sidewalk of Pike Street opposite 12005 Pike Street (behind McMaster Carr). Elevation noted is ground surface.

A = Shallow; B = Intermediate; C = Deep



LOG OF BORING MW17

(Page 2 of 8)

							i .			(1)	age 2 01 0)
			emical Ope No. CA0006				Logged Checke	ed By Compa	: Ronald Halpern, PG : Ronald Halpern, PG ny : WDC	OVA Driller Drilling Method Diameter Calibration Gas/Conc	: MiniRae : Steve, Joe, Daniel : Simulprobe/Split Spoon : 8 3/4 : 100 ppm isobutylene
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	Well1: M Well2: M Well3: M Elev.: 15	/W17B //W17C
25							SP				
30-				10:43			CL		(30-31' Split Spoon): CLAY, hard, strobrown (7.5YR 4/6), moist, mottled wit gray and reddish brown, ~3-5% fine s	th light	
35									(36' Off shaker): Poorly graded SANE ~80-90% fine to medium Sand, ~10-2 medium to coarse Sand.	0.	95% Cement/ 5% Bentonite 2" Dia Sch. 80 PVC Blank
40				12:00	0.7	100%	SP		At 11:45 set Simulprobe 4-41.5'. No water at 12:00 (40-41.5' off Simulprobe): Poorly grad SAND, predominantly (90-95%) fine timedium sand (up to 1 mm dia.), 5-10 low-end coarse sand (2-2.5 mm di.), yellowish brown (10 YR 5/4) to dark yellowish brown (10YR 4/4), wet.		
45 50 Boring	ocation	00.5	Southwest side	ewalk of f	Pike S	treet	ML	2005 Pil	(Based on E-logs) te Street (behind McMaster Carr).		

Boring location on southwest sidewalk of Pike Street opposite 12005 Pike Street (behind McMaster Carr). Elevation noted is ground surface.

A = Shallow; B = Intermediate; C = Deep

ARCADIS LOG OF BORING MW17 Infrastructure, environment, facilities (Page 3 of 8) Omega Chemical Operable Unit 2 **Date Completed** : June 28, 2005 OVA : MiniRae Project No. CA000646.0001 : Steve, Joe, Daniel Logged By : Ronald Halpern, PG Driller **Drilling Method** : Simulprobe/Split Spoon Checked By : Ronald Halpern, PG **Drilling Company** : WDC Diameter : 8 3/4 Calibration Gas/Conc : 100 ppm isobutylene Drill Ria : GF Star30 Mud Rotary Well1: MW17A Well2: MW17B Well3: MW17C Blow Count GRAPHIC Recovery Depth Elev.: 159.42 Time OVA DESCRIPTION in Feet Lab No. 95% Cement/ 50 (50-51.5' off Simulprobe): SILT with CLAY, 5% Bentonite OC2PMW17 13:50 1.1 100% soft to firm (~1/4" penetration), yellowish-brown (10YR 5/6), wet (not W-0-04 saturated), rapid dilatency, low toughness, Bentonite Chips low plasticity, occasional black (organic?) artifacts, occasional evidence of horizontal 2" Dia Sch. 80 layering, sticky. **PVC Blank** 55 ML (60-60.5' from Simulprobe): Same as 60 No Water àbove. (60.5-61.5' from Simulproble): Poorly Recovery 100% 0.4 graded SAND, fine-grained (max 1/2 mm dia.), light olive brown (2.5Y 5/3), moist, no odor. 2" Dia Sch. 80 **PVC Blank** 2" Dia Sch. 80 PVC (0.020" Slotted Screen (65-66.5' from Simulprobe): Poorly graded SAND, ~75-80% fine to medium grained 65 sand (up to 2 mm dia.), ~20-25% coarse Sand #2/16

(max 5 mm dia.), occasional fine gravel,

2" Dia Sch. 80 PVC w/Threaded

End Cap

light olive brown (2.5Y 5/3), wet.

(Based on E-logs)

Boring location on southwest sidewalk of Pike Street opposite 12005 Pike Street (behind McMaster Carr). Elevation noted is ground surface.

100%

SP

ML

A = Shallow; B = Intermediate; C = Deep

COMMON\MTech5\Omega Chemical\MW-17.BOR

70

75

Dry Canister

6/22/05

			RCAI	_		·			LOG OF BORING		
	Omega	a Ch	e, environn emical Oper No. CA0006	rable Ur	nit 2	<u> </u>	Date C Logged Checke Drilling Drill Rig	I By ed By Compa	: Ronald Halpern, PG Drille : Ronald Halpern, PG Drilli ny : WDC Dian	r ng Method eter	: MiniRae : Steve, Joe, Daniel : Simulprobe/Split Spoon : 8 3/4 : 100 ppm isobutylene
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	Well1: M Well2: M Well3: M Elev.: 15	IW17B IW17C
75-	M		No Water Recovery	8:30 9:30			ML		(75-77' off Simulprobe): SiLT, firm (~1/4" penetration), brown (7.5YR 5/4), mottled with light gray and reddish brown, wet (bu not saturated), low plasticity, low toughness, slow dilatency, low liquid limit (77-80' off mud return): SANDY SILT, ~1 fine to medium Sand, saturated (max 2 m dia.) in brown clayey Silt matrix. (Based on E-logs)	5% × 5/25/	— 2" Dia Sch. 80 PVC w/Thread End Cap
85~	M		No Water Recovery	10:30 11:30			CL		(85-87' off Simulprobe): SILTY CLAY, ha reddish brown (5YR 4/4), slightly moist, ~10-20% fine-grained size (15-20 mm dia modules of clay, sub-spherical and subrounded.	1 (23/2)	- 1:1 Bentonite Sand #3 - 2" Dia Sch. 80 PVC Blank - 2" Dia Sch. 80 PVC Blank
90											会会 会会 一Bentonite Chip
95 - 100 - 1	X		OC2PMW17 W-0-06 OC2PMW17 W-1-07	12:30 14:00			SP		(95-97' Split Spoon): Poorly graded SANI ~3-5% reddish brown clay, ~95-97% fine to medium Sand (<=1 mm dia.), strong brown (7.5YR 4/4), to olive brown (2.5Y 4/3), saturated.		— Sand #2/16 — 2" Dia Sch. 80 PVC (0.020" Slotted Screen
Donning			outhwest side		l Pike Si	treet o	pposite 12	2005 Pil	e Street (behind McMaster Carr).		□ 据【度】

A = Shallow; B = Intermediate; C = Deep



LOG OF BORING MW17

(Page 5 of 8)

	Intr	astruo	Etur	e, environn	nent, f	acılıtı	€S					(Pa	age 5 c	of 8)
	(emical Oper No. CA0006				Date Control Logged Checker Drilling Drill Rig	By ed By Compa	: Ronald Halpern, PG : Ronald Halpern, PG	OVA Driller Drilling M Diameter Calibratio	lethod	: Simulp : 8 3/4	Joe, Daniel robe/Split Spoon
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well1: M' Well2: M' Well3: M' Elev.: 159	₩17B W17C	
	100							SP		(102' off shaker): Poorly graded SA ~70-80% fine to medium grained, ~ medium to coarse (max 5 mm).	ND: -20-30%			[—] 2" Dia Sch. 80 PVC (0.020" Slotted Screen ─Sand #2/16
)	105			No Water Recovery	14:40 15:50					(105-107' off Simulprobe): CLAYEY firm (<1/4" penetration), light olive b (2.5Y 4/3), moist, rapid dilatency, m toughness, low plasticity, positive ri test, trace very fine sand.	orown noderate			−2" Dia Sch. 80 PVC w/Thread End Cap Bentonite Chips
	110							ML		Off mud return at 110' - same as ab	oove.			−2" Dia Sch. 80 PVC Błank
	115			OC2PMW17 W-0-08	6/22/05 6/23/05 7:50	1				(115-117' off Simulprobe): SILT, me stiff (1/4-3/8" penetration), light olive (2.5Y 5/3) to olive brown (2.5Y 4/3), (but not saturated), low plasticity. At 117' driller indicates change soil	e brown , wet type.			−1:1 Bentonite
COMMON/MTech5\Omega Chemical\MW-17.BOR	120-							SW-SC		(117' off shaker): Well graded SANI Silt and Gravel, ~5-10% Silt, ~5% C ~60-70% fine to coarse Sand (max mm), and ~30% fine gravel, yellowis brown, sand and gravel subangular subrounded and sub-spherical.	Clay, dia. 5 sh			Sand #3
COMMON/MTech5/Or	125							SP					次次次次次次 次次次次次次次	

Boring location on southwest sidewalk of Pike Street opposite 12005 Pike Street (behind McMaster Carr). Elevation noted is ground surface.

A = Shallow; B = Intermediate; C = Deep

(RCAI e, environn			es			LOG OF BORING	(Page 6 of 8)
		Omega Chemical Operable Unit 2 Project No. CA000646.0001					Date Co Logged Checke Drilling Drill Rig	By d By Comp	: Ronald Halpern, PG Driller : Ronald Halpern, PG Drilling any : WDC Diame	: MiniRae : Steve, Joe, Daniel : Simulprobe/Split Spoon ter : 8 3/4 tition Gas/Conc : 100 ppm isobutylene	
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	Well1: MW17A Well2: MW17B Well3: MW17C Elev.: 159.42
	125 —	M		No Water Recovery	9:00			SP		(125-127' off Simulprobe): Poorly graded SAND with SILT, ~3-5% Silt, 95-97% very fine Sand, olive (5Y 4/4), wet, does not roll rapid dilatency, no dry strength.	
	130-							CL		(From 130' based on E-log) (~132' off mud return): SILTY CLAY, olive brown (2.5Y 4/3), moderate toughness, moderate plasticity.	
	135 — - - - - - -			No Water Recovery			50%			(135-137' off Split Spoon): SILT with CLAY ~5% Clay, hard, olive (5Y 5/3), moist, low to medium toughness, moderate dilatency, moderate plasticity.	1:1 Bentonite Sand #3
	140 - - - - -							ML		Off mud return - same as above. Change in color - off mud return.	PVC Blank Standard S
Tech5\Omega Chemica\\MW-17.BOR	145 — - - - - - -			OC2PMW17 W-0-09	14:33					(145-147' off Simulprobe): SILT with CLAY firm (~1/4" penetration), dark greenish gray (Gley 1 4/1), wet, low to moderate toughness, low plasticity, moderate dilatency.	

Boring location on southwest sidewalk of Pike Street opposite 12005 Pike Street (behind McMaster Carr). Elevation noted is ground surface.

A = Shallow; B = Intermediate; C = Deep

150-

ARCADIS LOG OF BORING MW17 Infrastructure, environment, facilities (Page 7 of 8) : June 28, 2005 OVA Omega Chemical Operable Unit 2 **Date Completed** Project No. CA000646.0001 Driller Logged By : Ronald Halpern, PG **Drilling Method** Checked By : Ronald Halpern, PG **Drilling Company** Diameter Drill Rig : GF Star30 Mud Rotary Calibration Gas/Conc : 100 ppm isobutylene Well1: MW17A Well2: MW17B Well3: MW17C Blow Count GRAPHIC Recovery Elev.: 159.42 Depth OVA Time **USCS DESCRIPTION** in Feet Lab No. 150 ML (153-157' Split Spoon): SILTY CLAY, hard (fingernail penetration), dark greenish gray (Gley 1 3/1), with caliche (effervescent/HC1), dry to slightly moist. 155 CL

Change in drilling according to driller.

stains, moist.

(165-166' Split Spoon): Sandy non-plastic SILT, hard, pale-olive (5Y 6/3) with yellowish brown (10YR 5/8) oxidation

(170-171' Split Spoon): Poorly graded SAND-fine grained (0.1-0.2 mm dia.), light olive gray (5Y 6/2), wet, subangular to

~15% mafic, 5-15% other.

subrounded sand grains, ~70-80% quartz,

1:1 Bentonite Sand #3 -2" Dia Sch. 80 PVC Blank Bentonite Chips Sand #2/16 2" Dia Sch. 80 PVC (0.020" Slotted Screen

: MiniRae

: 8 3/4

: Steve, Joe, Daniel

: Simulprobe/Split Spoon

Boring location on southwest sidewalk of Pike Street opposite 12005 Pike Street (behind McMaster Carr). Elevation noted is ground surface.

40%

6/24/05 8:52

ML

SP

A = Shallow; B = Intermediate; C = Deep

160

165

170-

COMMON/MTech5\Omega Chemical\MW-17.BOR

)				RCAI e, environn			es		LOG OF BORING MW17 (Page 8 of 8)									
		Omega Chemical Operable Unit 2 Project No. CA000646.0001			Date Co Logged Checke Drilling Drill Rig	By d By Compa	: Ronald Halpern, PG Driller : Ronald Halpern, PG Drillin ny : WDC Diame	g Method	: MiniRae : Steve, Joe, Daniel : Simulprobe/Split Spoon : 8 3/4 : 100 ppm isobutylene									
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	Well1: N Well2: N Well3: N Elev.: 15	1W17B 1W17C						
	175~							SP		Change in color at ~175 ft to brownish yellow (10YR 6/6), with reddish brown oxidation planes.		2" Dia Sch. 80 PVC (0.020" Slotted Screen						
)	180 —			OC2PMW17 W-0-13	13:55		•	SP-SM		Driller indicates "GRAVEL" at 180'. (180' off mud return): Poorly graded SANE ~80-90% fine to medium grained (max 2 n dia.), ~5% coarse Sand, ~5% fine Gravel (max 14 mm dia.). (180-182' off Simulprobe): Poorly graded SAND with SILT, ~5-10% Silt, 90-95% fine to medium Sand (max 1 mm dia.), light oli brown (2.5Y 5/6), with yellowish brown (10YR 5/6), oxidation planes, wet, no odor	nm e ve	Sand #2/16 -2" Dia Sch. 80 PVC w/Threac End Cap						
	190 —			OC2PMW17 W-0-15	6/27/05			SP ML-CL		(190' off mud return): Poorly graded/well graded SAND, ~90% fine to medium-grained Sand (max 2 mm dia.) ~5-10% coarse Sand (max 5 mm dia.), <3 fine Gravel. (190-191.5' off Simulprobe): Poorly graded	i							
COMMON/M I echo/Omega Chemical/MW-17.BOR	195				10:55			I IYIL-UL	11 1 2.	SAND with SILT, ~10% Silt, ~3-5% coarse Sand, 85-90% fine to medium Sand (max mm dia.), oxidation planes, wet, no odor. (191.5-192' off Simulprobe): CLAYEY SILT/SILTY CLAY, moist, (2.5Y 5/6) with yellowish brown oxidation planes (10YR 5/6), no odor, moderate toughness, moderate to high plasticity, low dilatency. Bottom of boring at 192 ft.	2							
CMMCN/MIE	200																	

Boring location on southwest sidewalk of Pike Street opposite 12005 Pike Street (behind McMaster Carr). Elevation noted is ground surface.

A = Shallow; B = Intermediate; C = Deep

Omega Chemical OU-2

	SAMPLE I	DENTIFICA	ATION LOG	; ř	17 (214		- 1		
)					Sampled	Sample			1
	Date	Time	Operable Unit	Well Location	Medium (Water or Soil)	Type ¹ (0 thru 6)	Sequential Sample No.	Remarks	ſ
					Duplicate; 2 - I			ipment Blank	1
	ioampio ry		rip Blank;		MS/MSD;	6 - Regula		ipment blank	
	6/21/03	(2:SD	OC2	PAWIT		Y	01	Trip 1240 11/10A	1
	7 37	13:00	αz	PMWIT	w	2	02	Field Hank 3x 40m/	
		13:35		PMWIT		3	03	Equip Blank 3x40nl	
	,	15:10		PMIT	W	0	04	@51.5' 1x40ml VOA -	
	6/72/05	0815	OCZ	PMWT		L _I	05	Trip 1240m/VOA	(afferrese?
	1	14:00	0(2	PMW17	W	v	06	097' 3x40ml VOA -clear	1
	-	14:00	ocz	PMW17	W	1	07	Dup @ 97' 3x 40n/ Vox-clea	
	6/23/05		oc 2	PMW17	w	7	08	@107' 3x40ml VOH-clea	
	1	14:33	02	PALLUT		0_	09	147 3x yand VOA Chris	3
	V	_ 1, _	00.5	PMU 17	S	Ö	10	0 146-146.5	ľ'
	6/24/05	0845	OCZ	PMW17		4	11	Trip	ĺ
	 -	11:29	00.2	PMW17		0	12	@178 3x 40m/ VOA -d	ba /
		13:55	003	Pmuh	lu	v	13	@ 182' 3x40mi 10A-C	
	6/27/10	10:40	007	PMW 17		4	44	Til	10
	VI (IV)	10:55	600	Pricula		0	15	0192' 6 X 4 0m/ VOA	
_	6405	14:00	ocr	BINT	Mus		: 	NUMERTA BIN 4 x 40 m UMB)	1
	- 4) - 4(-	191,-						NORTH BIN (4x JAMS)	
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			002	PART 17-	Bin8-S-01A	,.01B:01	C-010	Soil from Bin B. was. 4 x 4-03 glass jars 21D Prill Mud from Bi	te Profile
				ļ				4 x 4-03 glass jars	
			002	PMW17-	Bing-Mud	01A - 01	B -01C -	DID Drill Mud from Bi	109
				<u>, i </u>				4 x 4 . 02 Jan J	
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PACIFIC SURVEYS

ELECTRIC LOG LATEROLOG 3 GAMMA RAY

Job No.						
12091	Company	WDC E	EXPLORA	TION & WEI	LLS	
	Well	MW-17	7			
File Me	Field	SANTA	A FE SPRI	NGS		
File No.	County	LOS A	NGELES	State	CA	
Location:					Other Serv	ices:
PIKE ST.; EAST OF PACIF	FIC				GR/LL3 CALIPER	
Sec.	Twp.		Rge.			
Permanent Datum				Elevation		Elevation
Log Measured Fro			0'	above perm. dat	um	K.B. D.F. G.L.
Drilling Measured	From G.l					G.E.
Date		6-24-05	j			
Run Number		ONE				· · · · · · · · · · · · · · · · · · ·
Depth Driller		194'				
Depth Logger		194'				
Bottom Logged Ir	nterval	193'				
Top Log Interval		10'				
Casing Driller		9.5" @	18'			
Casing Logger		18'				
Bit Size		9"				
Type Fluid in Hole	<u> </u>	BENTO	NITE			
Density / Viscosity	у	N/A				
pH / Fluid Loss		N/A				
Source of Sample	?	PIT				
Rm @ Meas. Ter	mp	7.6 @ 7	7F			
Rmf @ Meas. Te	mp	8.3 @ 7	7F			
Rmc @ Meas. Te	emp	N/A				
Source of Rmf /	Rmc	MEAS				
Rm @ BHT		N/A				
Time Circulation S	Stopped	2:15 PN	/i			
Time Logger on E		2:40 PN	Л			
Max. Recorded T		N/A				
Equipment Number	er	PS-2				
Location		L.A.				
Recorded By		LAPOR	TE			
Witnessed By		R. HALI	PERN			

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negigence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

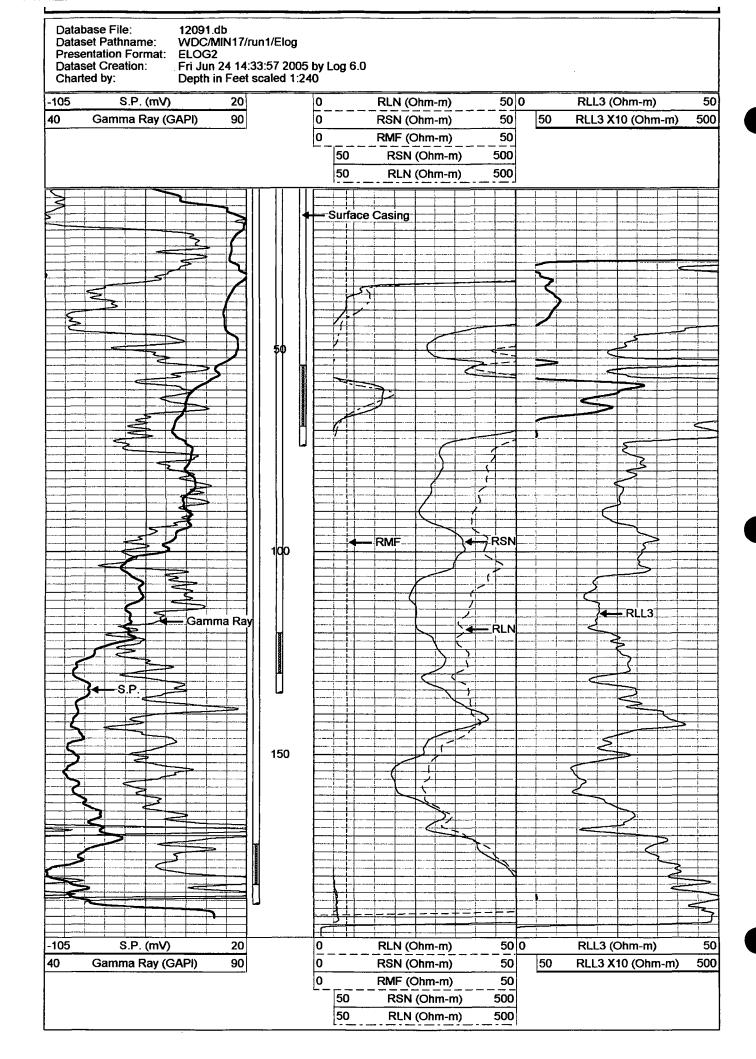
			EL	OG Calibration	Report			
	Gerial: Model:			D1 DTQ				
E	Shop Calibration Before Survey \ After Survey Ve	Verification Pe	erformed:	Mon .	or 29 12:26:0 Jun 06 11:08 or 29 12:32:4	:02 2005		
Shop Ca	libration							
	Readi Zero	ings Cal		Referer Zero	nces Cal		Resu Gain	lts Offset
Short Long	8.241 7.417	99.640 96.821		10.200 10.200	102.200 102.200	Ohm-m Ohm-m	1.007 1.029	1.90 4 -17.567
IEE VSN VLN	112.580 9.477 214.205	4730.241 5293.988 1417.736	counts counts counts	0.123 0.181 4.086	5.177 100.976 27.042	A V V		
Before S	urvey Verificat	ion				-		
	Read Zero	ings Cal		Referer Zero	nces Cal		Resu Gain	lts Offset
Short Long	9.282 457.514	99.534 107.030		7.493 106.708	99.615 106.708	Ohm-m Ohm-m	1.021 1.628	-1.982 -67.572
IEE VSN VLN	107.875 11.250 138.625	4570.704 5111.269 1374.056	counts counts counts	0.118 0.215 2.644	5.002 97.491 26.208	A V V		
After Su	vey Verificatio	n	·····					
	Read Zero	ings Cal		Refere Zero	nces Cal		Resu Gain	its Offset
Short Long	7.701 677.668	99.621 106.711		7.548 106.590	98.604 106.590	Ohm-m Ohm-m	0.991 0.993	-0.081 0.656
IEE VSN VLN	113.117 9.787 215.309	4756.250 5323.424 1425.576	counts counts counts	0.124 0.187 4.107	5.205 101.538 27.191	A V V		
After Su	rvey Verificatio	n compared t	o Before Surv	ey Calibration				
	Zer Before	ro After		Ca Before	After			
Short Long	7.493 677.412	7.548 673.391	Ohm-m Ohm-m	99.615 106.708	98.604 106.590	Ohm-m Ohm-m		
			Gamr	na Ray Calibrat	ion Report		<u> </u>	
7	Serial Number: Fool Model: Performed:	•		OG Apr 29 12:39:0	1 2005		· · · · ·	

Serial Number: Tool Model: Performed:	D1 ELOG Fri Apr 29 12:	89:01 2005	
Calibrator Value:	162	GAPI	
Background Reading:	167.616	cps	
Calibrator Reading:	722.887	cps	
Sensitivity:	0.291746	GAPI/cps	

F

Pice ST Care Pice ST	PACIFIC SURVEYS		ROLOG 3 MA RAY	or correctness of any or expenses incurred or to our general terms and								
Company Comp	12091 Company V Well N File No.	/IW-17 SANTA FE SPRINGS	e CA	Lo not guarantee the accuracy for any loss, costs, damages terpretations are also subject							1.35 zous libration Reference	
Common C			E-LOG CALIPER	and we cannot and a lable or responsible employees. These in hice Schedule.	in Report	2005	ЗАРІ		3API/	ration Keport 31 M&W	21.63	25.5
Death Logger 194' 194' 195' 194' 195' 1	og Measured From G. L. Orifing Measured From G. L. Date Run Number	0' above perm. c	t .	ther measurements ence on our part, be ence on our part, or officers, agents or of the our current F	Ray Calibratio	H or 29 12:58:38			511	ig Suard Callo		,
Sit Size 9	Bottom Logged Interval Fop Log Interval Casing Driller Casing Logger	193' 10' 9.5" @ 18' 18'		from electrical or of sos or wilful negigg	Gamma	13 GROI Fri Ap	192	31.16 205.0	0.931	Simplec Lon al Number: Model:	Jimea. Sy stem Readir	.310 .628
m @ Meas. Temp	ype Fluid in Hote ensity / Viscosity H / Fluid Loss ource of Sample	BENTONITE N/A N/A PIT		sed on inferences from the case of grant in the case of grant in the pretation in the preta				ding: ng:		Serie	ב פֿ	00
Time Logger on Bottom 2:40 PM	Rmf @ Meas. Temp Rmc @ Meas. Temp Source of Rmf / Rmc Rm @ BHT	8.3 @ 77F N/A MEAS N/A		s are opinions bas we shall not, excep ne resulting from a		ial Number: ol Model: formed:	ibrator Value:	kground Reading Seading sitivity:	į			
Recorded By ILAPORTE IV IV 교육 IV IV IV IV IV IV IV IV IV IV IV IV IV	Time Logger on Bottom Max. Recorded Temperature Equipment Number Location Recorded By	2:40 PM N/A PS-2		ccc Fold Here >>> All interpretations terpretation, and w sustained by anyon		Ser Too Per	Cali	Bac Cali	Sen			

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12091.db WDC/MIN17/run1/LL3F Database File: Dataset Pathname: **GUARD** Presentation Format: Dataset Creation: Charted by: Fri Jun 24 15:01:32 2005 Depth in Feet scaled 1:240 Gamma Ray (GAPI) 90 RLL3 (Ohm-m) 50 0 RSN (Ohm-m) 50 0 50 RLN (Ohm-m) 50 RLL3 X10 (Ohm-m) 500 50 RSN X10 (Ohm-m) 500 50 RLN X10 (Ohm-m) 500 -Surface Casing-100 Gamma Ray RLL3 RSN 150 50 Gamma Ray (GAPI) 90 0 40 RLL3 (Ohm-m) 50 0 RSN (Ohm-m) 0 50 RLN (Ohm-m) 50 RLL3 X10 (Ohm-m) 500 50 RSN X10 (Ohm-m) 500 50 RLN X10 (Ohm-m) 500

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CALIPER BOREHOLE VOLUMES

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All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys general

ny interpretation sustained by ar	If infepretation, and we shall not, except in the case of gross or wiltid negigence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred countries any any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.	gross or will'ut negregence on our part, be hable or responsi ride by any of our officers, agents or employees. These int terms and conditions set out in our current Price Schedule.	onsible for any loss, costs, e interpretations are also su tule.	damages, or expenses incurred c Ibject to Pacific Surveys' general
		Comments		
	XY Calig	XY Catiper Calibration Report		
	Serial Number: Tool Model: Performed:	SHORT Comprobe Fri Jun 24 15:27:08 2005		
<u></u>	Small Ring: Large Ring:	8 18	<u>=</u> .5	
		X Caliper	Y Caliper	
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Database File: 12091.db Dataset Pathname: WDC/MIN17/run1/CAL.1 Presentation Format: XYC Fri Jun 24 15:42:35 2005 by Calc 6.0 **Dataset Creation:** Charted by: Depth in Feet scaled 1:240 CSG SCHDL (ft) 0 LSPD (ft/min)00 Caliper (in) 20 0 0 LTEN (lb) 150 BIT SIZE (in) 20 86.8 Annular BHV ft^3-Total BHV ft^3 + 82.5 71.0 67.8 78.2 70.1 60.7 50 60.4 52.0 56.1 48.8 · Perforated Interval-51.9 45.6 47.6 42.1 38.5 43.4 Bit Size_ 35.0 100 39.2 - Caliper 31.3 34.7 30.4 - 27.7 - Perforated Interval $\overline{}$ 26.4 24.2 LTEN 22.3 20.7 150 18.1 16.8 Line Speed - 12.5 13.4 9.0 8.4 - Perforated Interval 5.0 4.8 1.1 1.1 CSG SCHDL (ft) 0 LSPD (ft/min)00 Ю 20 Caliper (in)

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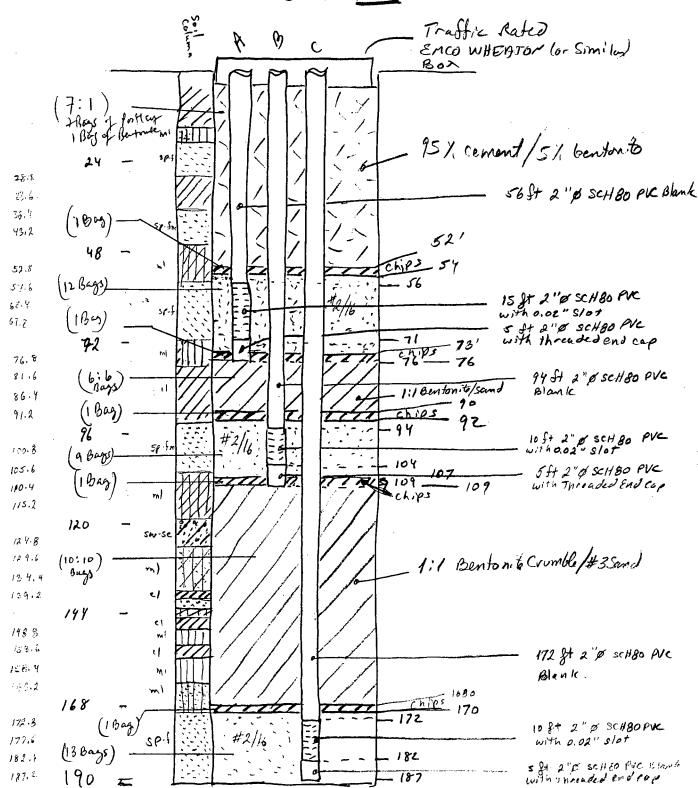
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BY: RM/+ DATE: 6/27/05

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WELL CONSTRUCTION DIAGRAM - MW17

JOB NO: CA000 646,000/,00009



ARCADIS LOG OF BORING MW18 Infrastructure, environment, facilities (Page 1 of 8) Date Completed : June 17, 2005 OVA : MiniRae Omega Chemical Operable Unit 2 Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller : Steve, Joe, Daniel Checked By : Ronald Halpern, PG Sampling Method : Simulprobe/Split Spoon **Drilling Company** : WDC Diameter : 8 3/4 Drill Rig : GF Star30 Mud Rotary Calibration Gas/Conc : 100 ppm isobutylene Well1: MW18A Well2: MW18B Well3: MW18C Blow Count GRAPHIC Recovery Elev.: 144.74 Depth Time OVA DESCRIPTION Feet Lab No. Cover Grass surface to 6" Surface 6/9/05 16:20 Casing (Off cylcone): SILTY CLAY, very dark grayish brown (2.5Y 3/2), moist to wet, low to moderate toughness, low plasticity, no dilatency. CL (4-8' off cyclone): SILTY CLAY, ~10-15% 5 fine to coarse sand (max 4 mm dia.), thick dark yellowish brown (10YR 4/4), silty clay matrix, slightly moist, rolls, moderate to high toughness, moderate plasticity. (8-17' off cyclone): Well graded SAND with CLAY, ~10-15% strong brown (7.5YR 4/6) clay ~85-90%, fine to coarse sand (max 4 mm dia.), strong brown, slightly moist, no 10 odor. 2" Dia. Sch. 80 **PVC Blank** 95% Portland Cement/5% Volclay 2" Dia. Sch. 80 PVC Blank 15 16:35 6/10/05 sw-sc (17-20' off mud shaker): Same as above. 9:15 20

In greenbelt on south side of Ann Street, ~140 ft. East of Santa Fe Springs Road, on north side of Liz Clairborne facility at 9400 Santa Fe Springs Road.

1			RCAI e, environn			es		LOG OF BORING MW18 (Page 2 of 8)						
			emical Opei No. CA0006				Date Co Logged Checke Drilling Drill Rig	l By d By Compa	: Ronald Halpern, PG : Ronald Halpern, PG	OVA Driller Sampling Diameter Calibratio	: S g Method : S r : 8	liniRae teve, Joe, Daniel imulprobe/Split Spoon 3/4 00 ppm isobutylene		
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well1: MW1 Well2: MW1 Well3: MW1 Elev.: 144.7	88B 8C		
25-	-			!					(Off mud shaker): Poorty graded SA with silt, ~10-15% silt, ~85-90% fine medium grained sand, olive brown (4/2).	e to				
30-				10:17			SP-SM		Poorly graded SAND with SILT, ~10 silt, ~85-90% predominantly fine-grasand with 5% medium-grained sand brown (2.5Y 4/3), wet, single cobblemm dia.), granitic, sub-spherical, subrounded.	ained 1, olive				
35-									(Based on E-Logs)			2" Dia. Sch. 80 PVC Blank 95% Portland Cement/5% Vo 2" Dia. Sch. 80 PVC Blank		
40°				10:55 12:40			CL		(40-42' Split Spoon): SILTY CLAY, sfirm (<1/4" penetration), olive gray 5/2), moist, light gray (5Y 7/1), high toughness, high plasticity, positive rest, blocky fracture, silty features, ogray matrix with no definite shape.	(5Y ibbon				
45 ⁻										:				

At 50' from mudpan - same as above

In greenbelt on south side of Ann Street, ~140 ft. East of Santa Fe Springs Road, on north side of Liz Clairborne facility at 9400 Santa Fe Springs Road.

Elevation = finished surface; A = Shallow; B = Intermediate; C = Deep

50-



LOG OF BORING MW18

Infrastructure, environment, facilities Omega Chemical Operable Unit 2 Project No. CA000646.0001							Complete	ed : June 17, 2005	OVA		je 3 of 8)
							completed By ked By g Compa	: Ronald Halpern, PG : Ronald Halpern, PG	Driller Sampling Met Diameter	: S hod : S : 8	Steve, Joe, Daniel Simulprobe/Split Spoon 3 3/4 00 ppm isobutylene
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery % USCS	GRAPHIC	DESCRIPTION	W W	Vell1: MW [.] Vell2: MW [.] Vell3: MW [.] Vel.: 144.7	18B 18C
50	M			13:35		ML		(50-52' Split Spoon): SILT, firm, ligi brown (2.5Y 5/4), moist, no odor.	ht olive		95% Portland Cement/5% Vo 2" Dia. Sch. 80 PVC Blank
-						SP-SI	4	(53' off shaker): Poorly graded fine with SILT, predominantly fine-grain Wet from 54 feet.	ied.		—Bentonite Chip
55			OC2-PMW18 W-0-03 OC2-PMW18 W-1-04	•		SP		(55-57' off Split Spoon): Poorly grad SAND, ~3-5% clay, 95-98% predor fine sand (max 0.5 mm dia.), <5% in grained (max dia. 1 mm), olive brow 4/3), saturated. (~58' off mud pan): Increase in grain fine and medium Sand (max 2 mm)	minantly medium wn (2.5Y in size to		
				8:00		sw-s	И	(62'): Increasing grain size - grades well graded SAND with SILT, ~3-5', 85-95% fine to coarse sand, ~5-10' sub spherical to sub tabular gravel.	% silt, % fine		2" Dia. Sch. 80 PVC Blank - 2" Dia. PVC Sch 80 (0.020' Slotted Screer
65-			OC2-PMW18 W-0-06 OC2-PMW18 W-0-07	10:10		GW	. d . d	(65-66.5' Split Spoon): Well graded GRAVEL, ~5-10% coarse sand, 90 fine and coarse gravel (max 30 mm igneous and metamorphic origin (q	95% n dia.) of		—Sand #2/16
70-	,					SP		igneiss), gravel, subrounded, sub site elongated. (66.5-67' Split Spoon): Poorly grade SAND, fine-grained (max 0.5 mm dolive brown (2.5Y 5/3), wet. (72'): Increasing grain size up to 2 repale olive (5Y 6/3) with dark mafic reparts of the subrounding size of the subrou	ed dia.), light mm dia.,		

In greenbelt on south side of Ann Street, \sim 140 ft. East of Santa Fe Springs Road, on north side of Liz Clairborne facility at 9400 Santa Fe Springs Road.

ARCADIS LOG OF BORING MW18 Infrastructure, environment, facilities (Page 4 of 8) **Date Completed** : June 17, 2005 OVA · MiniRae Omega Chemical Operable Unit 2 Project No. CA000646.0001 : Ronald Halpern, PG Driller : Steve, Joe, Daniel Logged By Checked By : Ronald Halpern, PG Sampling Method : Simulprobe/Split Spoon **Drilling Company** Diameter : 8 3/4 Drill Rig : GF Star30 Mud Rotary Calibration Gas/Conc : 100 ppm isobutylene Well1: MW18A Well2: MW18B % Well3: MW18C Blow Count GRAPHIC Recovery Elev.: 144.74 Depth OVA Time uscs DESCRIPTION in Feet Lab No. 75 (75-77' from Simulprobe): Well graded 2" Dia. Sch. 80 PVC w/Threaded End Cap SAND with Clay and Gravel: ~10-15% silt, OC2-PMW18 0.6 ~40% predominantly fine-gravel (max 19 W-0-09 12:25 mm dia.), some coarse (up to 35 mm dia.), Sand #2/16 ~45-50% fine to coarse sand (max 4 mm dia.), light olive brown (2.5Y 5/4), wet; gravel is of igneous and metamorphic origin, subangular to subrounded, platy to sub spherical. 80 1:1 Bentonite Sand #3 Encountered more rocks at ~82' according SW-SM to driller. 2" Dia. Sch. 8d **PVC Blank** (83-85' off shaker): Fine to coarse SAND with SILT, ~5-10% Silt. 85 (86-87' Split Spoon): Well graded Silty OC2-PMW18 SAND with Gravel: ~10-20% light olive W-0-10 16:04 brown (2.5Y 5/4) silt, 30-40% fine and Bentonite Chips coarse gravel (max 20 mm dia.) subangular 2" Dia. Sch. 80 PVC Blank and sub spherical, ~40-60% fine to coarse sand, gravel is reworked sediment consisting of gravel-size rocks of igneous metamorphic origin encased in semi-indurated sand and silt layer. 90 (~90' off shaker): Poorly graded SAND, fine to medium, olivé (5Y 4/3), saturated. SP OMMON/MTech5/Omega Chemical/MW-18.BOR Sand #2/16 95 " Dia. PVC (Possible Slough - 95-96.5'): Poorly graded GRAVEL with Sand and Silt, ~5-10% silt, Sch 80 (0.020" Slotted Screen GP-GM OC2-PMW18 6/14/05 ~20-25% medium to coarse sand, ~70% W-0-12 predominantly fine gravels (up to ~14 mm), ~5% coarse gravel (max 25 mm dia.)

subrounded.

(97' Split Spoon and Shaker): Poorly

graded SAND: fine to medium-grained (max 2 mm dia.), olive (5Y 7/4), saturated.

Increasing grain size w/depth (off shaker):

In greenbelt on south side of Ann Street, ~140 ft. East of Santa Fe Springs Road, on north side of Liz Clairborne facility at 9400 Santa Fe Springs Road.

SP

Elevation = finished surface; A = Shallow; B = Intermediate; C = Deep

100

	Omega	Ch	e, <i>environn</i> emical Oper No. CA0006	able Ur	nit 2	<u>—</u> —	Date Cogged	Ву	ed : June 17, 2005 OVA : Ronald Halpern, PG Driller : Ronald Halpern, PG Samplin	(Page 5 of 8) : MiniRae : Steve, Joe, Daniel		
							Drilling Drill Rig	Compa	ny : WDC Diamete	r	: Simulprobe/Split Spoo : 8 3/4 : 100 ppm isobutylene	
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	Well1: M Well2: M Well3: M Elev.: 14	W18B W18C	
100							sw-sc		(100' off shaker): Well graded SAND with Clay, ~5-10% fines, ~60% fine to medium Sand, ~40-45% coarse Sand (max 5 mm dia.) subrounded, olive (5Y 7/4), saturated.		— Sand #2/10 — 2" Dia. Sch	
105			OC2-PMW18 S-0-13 No Water Recovery	9:45 11:00		0%	ML		(107-109' off Split Spoon): SILT, firm, (<=1/4" penetration), olive (5Y 4/3) with strong brown (7.5YR 4/6), vertical banding, moist to very moist, but no saturated, blocky fragmentation.		End Cap Bentonite (Section 1987) Control of the control of the	
115			OC2-PMW18 W-0-14	13:05	0.1		SP-SM		(115-119' off Simulprobe): Poorly graded SAND with Silt, predominantly fine Sand, ~5-10% Silt, moist to very moist, olive brown (2.5Y 4/3 - 2.5Y 4/4).		2" Dia. Sch PVC Blank	
125							ML			2.	A CHARLES AND AND AND AND AND AND AND AND AND AND	



LOG OF BORING MW18

(Page 6 of 8)

	(Omega Proj	a Ch	nemical Oper No. CA0006	able Ur 46.000	nit 2 1	11	Date Control C	By d By Compa	: Ronald Halpern, PG : Ronald Halpern, PG ny : WDC	OVA Driller Sampling Method Diameter Calibration Gas/Conc	: MiniRae : Steve, Joe, Daniel : Simulprobe/Split Spoon : 8 3/4 : 100 ppm isobutylene
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	Well1: N Well2: N Well3: N Elev.: 14	1W18B 1W18C
	125-			OC2-PMW18 W-0-15 OC2-PMW18 S-0-16		0.1				(125-128' off Simulprobe): Clayey SI ~10-20% clay, ~80-90% silt, moist to moist, olive brown (2.5Y 4/4), low toughness, medium plasticity, moder dilatency, low dry strength.	o very	ASSESSED ASS
	130							ML				-1:1 Bentonite
	135	\bigvee		OC2-PMW18 S-0-18 No Water Recovery	6/15/05 7:55	0.4	0%			(135-137' Split Spoon): SILT, firm (< penetration), olive (5Y 4/4), moist, so light gray artifacts.	1/4"	Sand #3 2" Dia. Sch. 80 PVC Blank
3.BOR	140							CL		(~141 off mud return): Silty CLAY, yellowish brown (10YR 5/4).	1	Bentonite Chip
COMMONIMTech5\Omega Chemica\\MW-18.BOR	145 —			OC2-PMW18 W-0-21	9:35 11:00			ML		(145-147' off Simulprobe): SILT, firm (5Y 4/4), moist, light gray (possible n artifacts-looks like wormhole - seconfill with secondary porosity. Increasing sand content based on E-	narine) dary	— Sand #2/16 — - 2" Dia. PVC
OMMONIMT	150											Sch 80 (0.020" Slotted Screen

In greenbelt on south side of Ann Street, \sim 140 ft. East of Santa Fe Springs Road, on north side of Liz Clairborne facility at 9400 Santa Fe Springs Road.

ARCADIS

LOG OF BORING MW18

In	fr astru	ctur	e, environn	ment, f	aciliti	es				(Page 7 of 8)
			nemical Oper No. CA0006				Date Co Logged Checke Drilling Drill Rig	By d By Compa	: Ronald Halpern, PG : Ronald Halpern, PG	OVA : MiniRae Driller : Steve, Joe, Daniel Sampling Method : Simulprobe/Split Spoc Diarneter : 8 3/4 Calibration Gas/Conc : 100 ppm isobutylene
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	USCS	GRAPHIC	DESCRIPTION	Well1: MW18A Well2: MW18B Well3: MW18C Elev.: 144.74
150	-						SP-SW		Change in soil type based on driller observation and on material from m return. Poorly to well graded SAND, very fi high-end medium-grained (max 2 m	nud
155			OC2-PMW18 W-0-22	12:15 13:50			ML	3006 ME	(155-157' from Simulprobe): Clayey firm, (<1/4" penetration), olive (5Y 4 wet, low toughness, high plasticity, dilatency, low dry strength with low limit.	rapid Sch 80 (0.0 Slotted Scn #2/16
160							SP-SW		Driller indicates "gravel" ~2' thick at 157-159. E-logs suggest resistent material fro ~158-163'. Clayey SILT (with Sand) off mud re	om
165			No Water Recovery	14:20 16:50 6/16/05 7:15		0%	ML		~162'. (165-167' Simulprobe): Clayey Sand ~10% Clay, 50% Silt, 30-40% fine Sfirm (<1/4" penetration), olive (5Y 4) moist to wet but not saturated.	dy SILT, Sand;
170 ⁻	· · · · · · · · · · · · · · · · · · ·						SP		(Based on E-logs)	- Bentonite (
175	-									

In greenbelt on south side of Ann Street, \sim 140 ft. East of Santa Fe Springs Road, on north side of Liz Clairborne facility at 9400 Santa Fe Springs Road.



Infrastructure, environment, facilities (Page 8 of 8) : MiniRae Omega Chemical Operable Unit 2 Date Completed : June 17, 2005 OVA Project No. CA000646.0001 : Ronald Halpern, PG Driller : Steve, Joe, Daniel Logged By Checked By : Ronald Halpern, PG Sampling Method : Slmulprobe/Split Spoon : WDC **Drilling Company** Diameter : 8 3/4 : GF Star30 Mud Rotary Calibration Gas/Conc : 100 ppm isobutylene Drill Rig Well1: MW18A Well2: MW18B % Well3: MW18C **Blow Count** Recovery GRAPHIC Elev.: 144.74 Depth Time OVA JSCS DESCRIPTION Feet Lab No. 175 (175-176' Simulprobe): Poorly graded SAND, ~5% silt, moist to wet but not SP saturated, olive gray (5Y 4/2). OC2-PMW18 9:50 0.1 W-0-24 0.1 (176-177' Simulprobe): SILT, moist to wet, not saturated, olive gray (5Y 4/2), ~1 cm horizontal layer of yellowish discoloration. ML 180 (180' off mud return): Poorly graded SAND, fine to medium-grained (up to 1.5 mm), less than 3% coarse, driller indicates some gravel. Bentonite Chips (185-187' off Simulprobe): Poorly graded SAND, fine-grained (max 0.2 mm dia.), grayish brown (2.5Y 5/2), saturated; 185 SP OC2-PMW18 12:50 W-0-26 horizontal oxidized banding at ~186.5 ft. (1" thick) with horizontal fracture plane. Oxidized banding is strong brown (7.5YR 4/6) to dark yellowish brown (10YR 4/6). 190 Bottom of boring 190'. COMMONIMTech5\Omega Chemica\\MW-18.BOR 195 200

In greenbelt on south side of Ann Street, ~140 ft. East of Santa Fe Springs Road, on north side of Liz Clairborne facility at 9400 Santa Fe Springs Road.

Elevation = finished surface; A = Shallow; B = Intermediate; C = Deep

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PMW18

SAMPL	E IDENTIF	ICATION LOG	

		TION LOG	T				
		Operable	Well	Sampled Medium	Sample Type!	Sequential	
Date	Time	*Unit	Location	(Water or Soll)		Sample No.	Remarks
ample Ty	/pe: 0 - Pri	nary Sami	ole; 1 - Fiel	d Duplicate; 2	- Field Bla	nk; 3-	Equipment Blank
		rip Blank;	5 -	MS/MSD;	6 - Regula	tory Split.	
6/10/05	7:45	OC 2	PMW18	W	У	01	Trip 1x40ml VOM
	750	OCT	1MW18	W	2	02	Field Blank 3×110m/00A
	15:20	002	BUMIS	ω	0	03	@52' 3x40m 1 VOA
	15120	002	CWMB	CJ		04	est 2x40ml VOB
6/13	8125	OCZ	PMW18	W	4	05	Trip 1x40m/VorA
<i></i>	10:15	002	PMW18	(1)	0	06	@67' 4x 40m WOA-clea
	10:15	OC 7	PMWIS	S	Ø	07	30:1 Suple 66.5-67
	10:35	OCZ	PMUIX	W	3	08	Esur Blank
	12:25	<i>0</i> C2	PMWIX	ω	0	09	@77' YX Yoml WA
	16:04	OC Z	PMW18	ω	0	10	087' 4x 40 ml von-cla
10/14	07:30	OC ?	PMW18	ω	U.	11	TripBlank
	07:40	002	PMW18	6)	O	12	@97' 3440 ml VOA-cles
	11:00	0c2	PMW/8	S	Ø	13	Soil 108-108,5 3"x 4"
		OC Z	8N118	(U	(A)	12	Q49-115
	1365	062	84Mg	W	\$	18	@119 4X 4 CML NOA - Cles
$\Box J$	1530	осг	PMWIS	W	Ø	15	@128 4×40me VOA-Use
11	1540	.0(2	PMW18	Ś	Ø	2	3125-130' 3"X 4"
6/15	07:45	002	PMUIS		7	17	Trip 1 X 40m/ VOA
	07:55	067	PMUIS	Z	0	18	Q-135.5-136' 1x3"x 4"
	08:22	<i>©</i> (.7	PMWIS	W	B	19	Equip Blank 3x40mi
	08;35	0 C 7	Privily	L.J	2	20	Field Blant 3x40ml
	11:(00	oc z	Priwix	4)	0	21	@-148 3x40ml VOA -de
4	13.50	8 C. Z	214019	51	0	22	@158' 2/2 x 110 m VOA
6/16/AS	07:30	Oci	<i>smuls</i>	W	Ч.	23	Jrip Kyomlvon,
1 - 1	0956	002	PMWIS	W	0	24	@ 177' 5×40m UOD/MIN
	0900	002	PMW18	5	Ø	25	@ 175-176 3"×4!1
	12:50	٥٥٧	BMW18	ω	Ø	<i>a</i> 6	@-187 5x40ml von-
,							
							·
			-				
		- "					· · · · · · · · · · · · · · · · · · ·
						, b.v	

Freld Dup 104. of Primary
Field Blank 1st + 104. primary
Equip Blank 1/ sampling Event.
Trip every cooler.

Page ____

PALIFIC **SURVEYS**

ELECTRIC LOG LATEROLOG 3 GAMMA-RAY

Job	No
1208	13

Company

WDC EXPLORATION & WELLS

Well

PMW-18

Field

SANTA FE SPRINGS

County

LOS ANGELES

State

CA

Other Services:

Elevation

Location:

IN ANN STREET, EAST OF SANTA FE SPRINGS RD, IN FRONT OF 9400

SANTA FE SPRINGS RD. **OMEGA CHEMICAL OU-2**

LL3/GR CALIPER

Sec. Permanent Datum

G.L. G.L.

Twp.

Elevation 0'

Rge.

I Cimaneni Datum	O. L.		Lievation	i
Log Measured From	G.L.	0'	above perm. datum	K.B. D.F. G.L.
Drilling Measured From	G. L.			Ğ.Ĺ:
Date		6/16/2005		
Run Number		ONE		
Depth Driller		191'		
Depth Logger		193'		
Bottom Logged Interval		193'		
Top Log Interval		10'		
Casing Driller		10" @ 20'		
Casing Logger	_	20'		
Bit Size		8.75"		
Type Fluid in Hole		BENTONITE		
Density / Viscosity		N/A		
pH / Fluid Loss		N/A		
Source of Sample		PIT		
Rm @ Meas. Temp		8.3 @ 77 F		
Rmf @ Meas. Temp		9.3 @ 77 F		
Rmc @ Meas. Temp		N/A		
Source of Rmf / Rmc		MEAS		
Rm @ BHT		N/A		
Time Circulation Stopped		12:45		
Time Logger on Bottom		14:20		
Max. Recorded Temperature		N/A		
Equipment Number		PS-1		
Location		L.A.		
Recorded By		T. HOWARD		
Witnessed By				

r correctness of any or expenses incurred or our general terms and and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations conditions set out in our current Price Schedule. All interpretations ar interpretation, and we s sustained by anyone re

Comments

ELOG Calibration Report

01 010

Snop Calibration Performed: **Before Survey Verification Performed**: After Survey Verification Performed:

SUN UCT U3 15:58:27 2004 Fri Mar 28 18:39:54 2003 Tue Nov 20 13:45:24 2001

Shop Calibration

Read	ings		Refere	nces		Resi	ults
Zero	Cal		Zero	Cal		Gain	Offset
8.338	99.830		10.200	102.200	Ohm-m	1.006	1.815
4.440	54.107		10.200	102.200	Oilli-ill	1.020	-21.000
133.593	6285.944	counts	0.146	6.879	Α		
89.009	7086.491	counts	1.698	135.166	V		
130.741	1836.815	counts	2.494	35.035	V		
	8.338 4.448 133.593 89.009	8.338 99.830 4.448 94.107 133.593 6285.944 89.009 7086.491	Zero Cal 8.338 99.830 4.448 94.107 133.593 6285.944 counts 89.009 7086.491 counts	Zero Cal Zero 8.338 99.830 10.200 4.448 94.107 10.200 133.593 6285.944 counts 0.146 89.009 7086.491 counts 1.698	Zero Cal Zero Cal 8.338 99.830 10.200 102.200 4.448 94.107 10.200 102.200 133.593 6285.944 counts 0.146 6.879 89.009 7086.491 counts 1.698 135.166	Zero Cal Zero Cal 8.338 99.830 10.200 102.200 Ohm-m 4.448 94.107 10.200 102.200 Ohm-m 133.593 6285.944 counts 0.146 6.879 A 89.009 7086.491 counts 1.698 135.166 V	Zero Cal Zero Cal Gain 8.338 99.830 10.200 102.200 Ohm-m 1.006 4.448 94.107 10.200 102.200 Ohm-m 1.026 133.593 6285.944 counts 0.146 6.879 A 89.009 7086.491 counts 1.698 135.166 V

Before Survey Verification

	Readi	ings		Referer	nces		Resu	ılts
	Zero	Cal		Zero	Cal		Gain	Offset
Short Long	255.170 1150.040	100.412 103.869		46.444 103.264	100.411 103.264	Ohm-m Ohm-m	-0.349 0.219	135.426 80.559
IEE VSN VLN	140.620 403.139 454.231	6475.111 7304.796 1889.074	counts counts counts	0.154 7.689 8.664	7.086 139.330 36.032	A V V		

After Survey Verification

	Read	ings		Referei	nces		Resu	ults
	Zero	Cal		Zero	Cal		Gain	Offset
Short Long	0.000	99.861 102.069		0.000 102.055	99.853 102.055	Ohm-m Ohm-m	1.000 1.000	0.000
IEE VSN VLN	129.370 142.833 114.778	6528.851 7325.000 1871.738	counts counts counts	0.142 2.724 2.189	7.145 139.715 35.701	A V V		

After Survey Verification compared to Before Survey Calibration

	Zer	0		Cal		
	Before	After		Before	After	
Short	46.444	0.000	Ohm-m	100.411	99.853	Ohm-m
Long	331.945	0.000	Ohm-m	103.264	102.055	Ohm-m

Gamma Ray Calibration Report

Serial Number: Tool Model: Performed:	D1 ELOG Mon Jan 26 16	S:20:05 2004
Calibrator Value:	162	GAPI
Background Reading: Calibrator Reading:	172.547 717.938	cps cps
Sensitivity:	0.297034	GAPI/cps

atabase File: ataset Pathname:

12083.db

Presentation Format:

ELOG_UP1

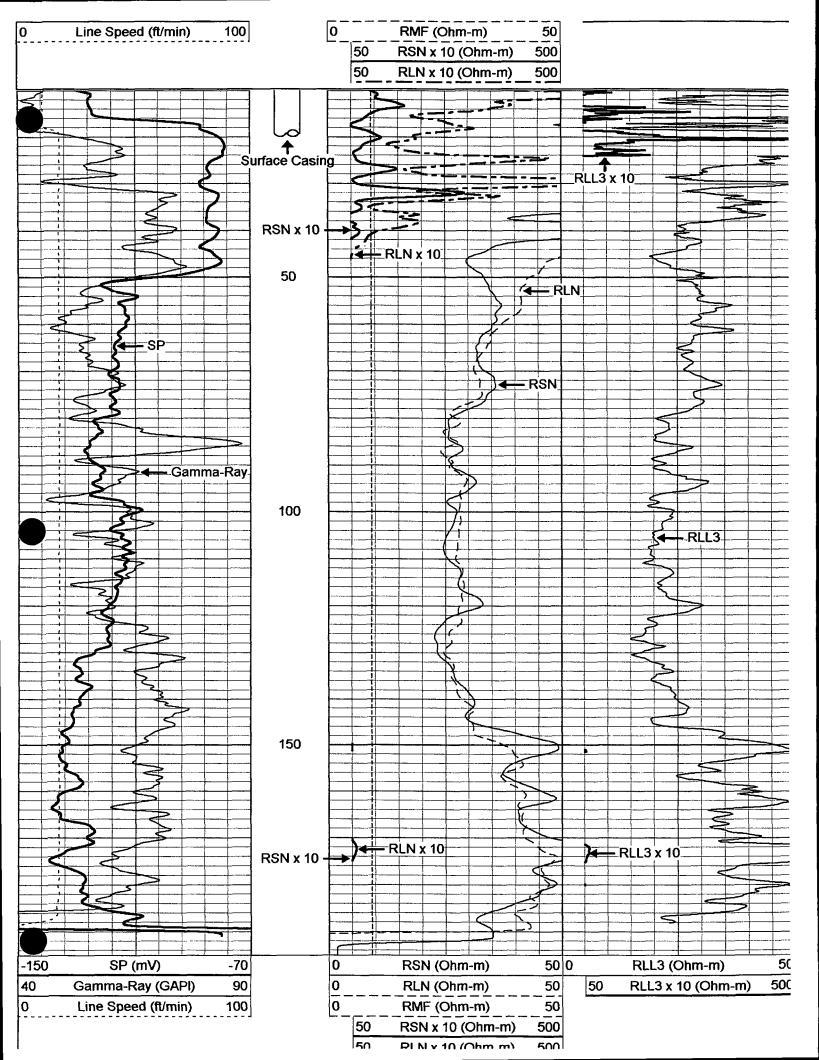
ELOG

Dataset Creation:

Thu Jun 16 14:21:04 2005 by Log Warrior Version 6.6 Depth in Feet scaled 1:240

Charted by:

-150	SP (mV)	-70	0	RSN (Ohm-m)	50	0		RLL3 (Ohm-m)	50
40	Gamma-Ray (GAPI)	90	0	RLN (Ohm-m)	50		50	RLL3 x 10 (Ohm-m)	500



PALIFIC SURVEYS

Witnessed By

LATEROLOG 3 GAMMA-RAY

	- ,	·				
Job No.	<u> </u>				·	
12083	Company	WDC	EXPLORA	TION & WE	LLS	
	Well	PMW-	18			
	Field	CANT	A FE SPRI	NGS		
	County	LOS A	NGELES	State	CA	
Location:					Other Servi	ces:
IN ANN STREE SANTA FE SPR OMEGA CHEMI		A FE SPRI	NGS RD, IN FRO	ONT OF 9400	EL/GR CALIPER	
Sec.	Twp.	_	Rge.			
Permanent Datum	n G.	L.	· <u></u>	Elevation		Elevation
.og Measured Fr			0'	above perm. dat	um	K.B. D.F. G.L.
Orilling Measured	From G.	L.				Ğ.Ĺ.
Date		6/16/20	005			
Run Number		ONE				
Depth Driller		192'				
Depth Logger		193'				
Bottom Logged I	nterval	193'				
Top Log Interval		10'				
Casing Driller		10" @	20'			
Casing Logger		20'				
Bit Size		8.75"				
Type Fluid in Hole		BENTO	DNITE			
Density / Viscosit	у	N/A				
oH / Fluid Loss		N/A				
Source of Sample		PIT				
Rm @ Meas. Te		8.3 @				
Rmf @ Meas. Te		9.3 @	77 F			
Rmc @ Meas. Te		N/A				
Source of Rmf /	Rmc	MEAS				· · · · · · · · · · · · · · · · · · ·
Rm @ BHT		N/A				
Time Circulation S		12:45				<u> </u>
Time Logger on E		14:20				
Max. Recorded T		N/A				
Equipment Numb	er	PS-1				
ocation		L.A.				
Recorded By		T. HOV	VARD		ĺ	

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and confidence in our current Price Schedule.

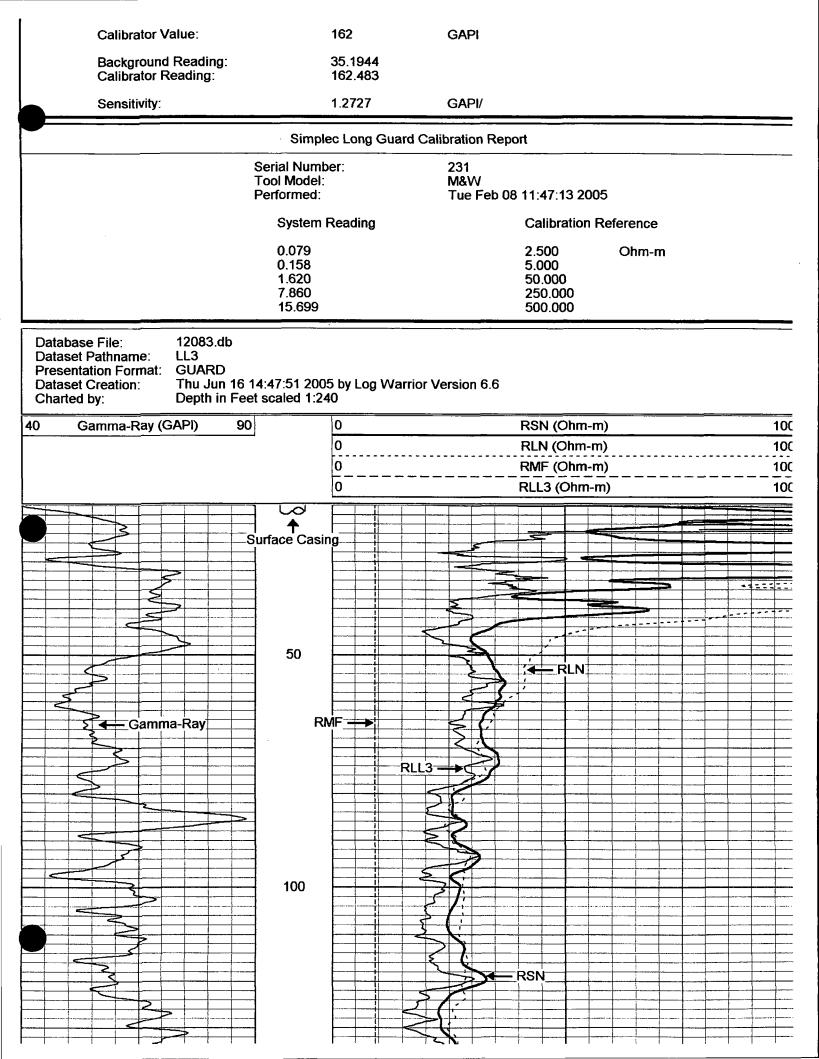
Comments

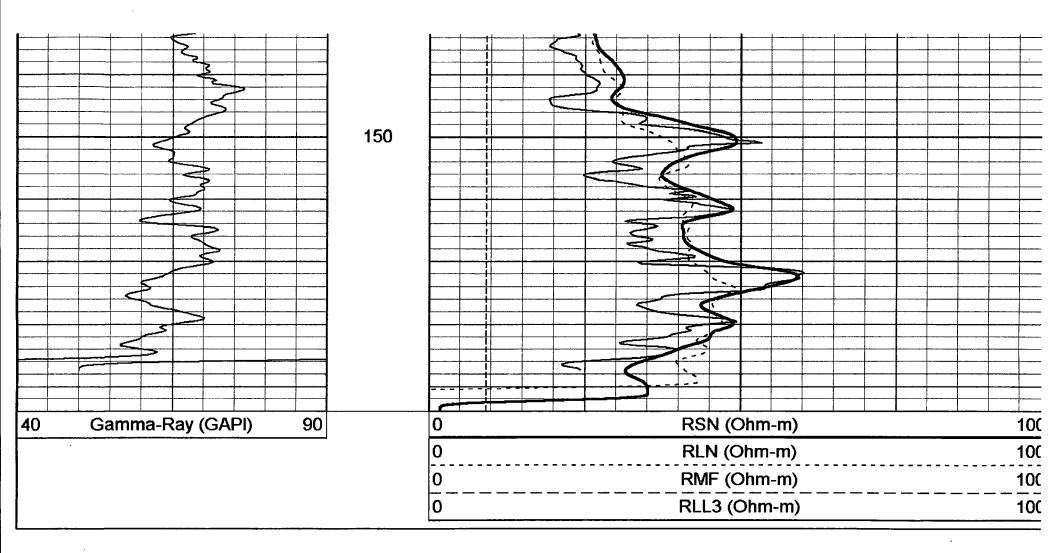
Gamma Ray Calibration Report

odel: ned:

Serial Number: Tool Model: Performed:

13 GROH Mon Jan 26 16:29:15 2004





PAL₁FIC SURVEYS

Production String

CALIPER BOREHOLE VOLUMES

Job No.			<u>.</u>	l						
12083	Com	pany \	NDC	EXPL (DRAT	101	1 & WEI	LLS		
	Well	F	PMW	-18						
	Field	1 9	SANT	A FE S	SPRIN	IGS	}			
	Cou	ntv l	08/	ANGEL	EQ		State	CA		
			-007	1140			Otate		-	
Location:								Other Ser	vices:	
IN ANN STREET SANTA FE SPR OMEGA CHEMI	INGS RI) .	FE SPR	INGS RD,	IN FROM	IT OF	9400	LL3/GR EL/GR		
Sec.		Twp.	,		Rge.					
Permanent Datum		(3.L.			Eleva	ation			Elevation
Log Measured Fr	om		3.L.	(0'	abov	e perm. dat	um	K.B.	
Drilling Measured			3. L.		•		•		K.B. D.F. G.L.	
Date			6/16/2	005		1				
Run Number			ONE	000		 				
Depth Driller			191'			 				•
Depth Logger			193'			 				
Bottom Logged In	nterval		193'			 				
Top Log Interval	ikoi vai		10'			1			—-	
Type Caliper			3-ARM	1					•	
Type Fluid in Hole	<u> </u>			ONITE		1				
Density / Viscosit			N/A	OMIL		 				
Max. Recorded T			N/A				-			
pH/Fluid Loss	Citip.		N/A			<u> </u>				
Time Well Ready			14:10				·			
Time Logger on E			14:20			-				
Equipment Numb			PS-1							
Location	<u></u>		L.A.			\vdash				
Recorded By				WARD		├				····
Witnessed By			1.110	TIAND						
vviillessed by	Borol	nole Record				L	Gravel F	eed/Tubing	Schedu	ıle .
Run Number	Bit	From	, ,	To	5	ize	Тур		From	To
ONE	N/A		•		 				110111	1,0
TWO	8.75"	0'		193'	+		+			1
·										
Casing Schd.		Size			/gt/Ft			op ·		Bottom
Surface String		10"			<u>N/A</u>		+	2		20'
Production String				_		i				
Production String										
Production String										

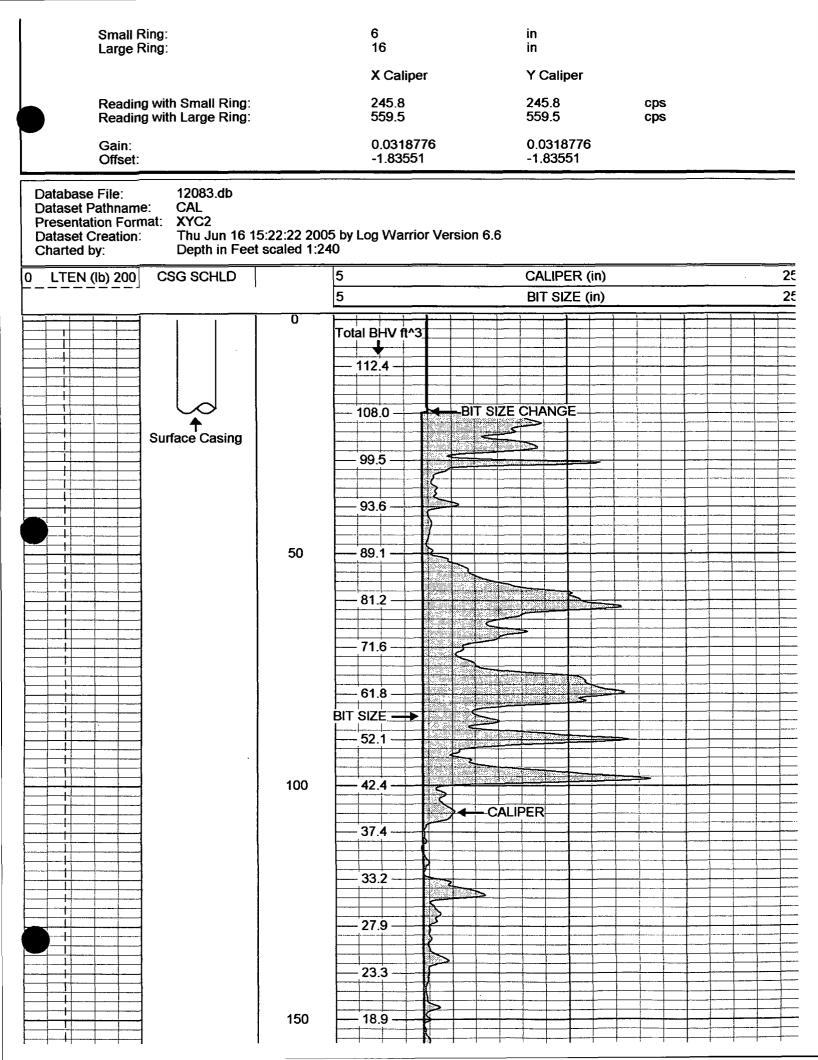
All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred o sustained by any one resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general tended by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general tended by anyone resulting from any interpretation made by any of our officers, agents or employees.

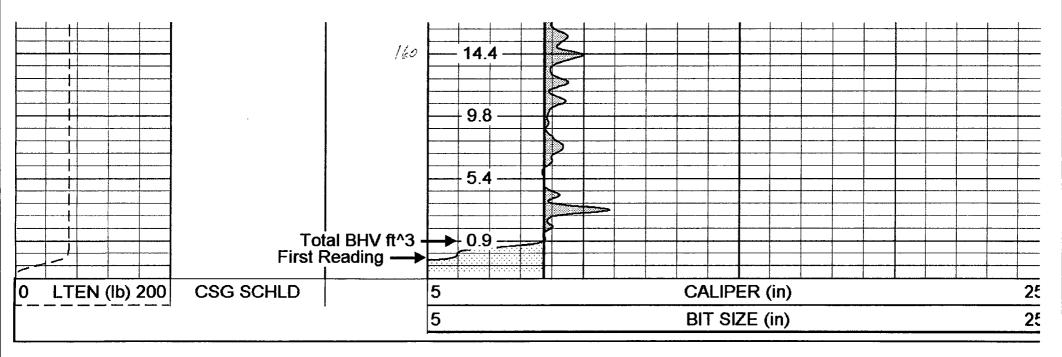
Comments

XY Caliper Calibration Report

Short Comprobe Mon Nov 22 10:26:56 2004

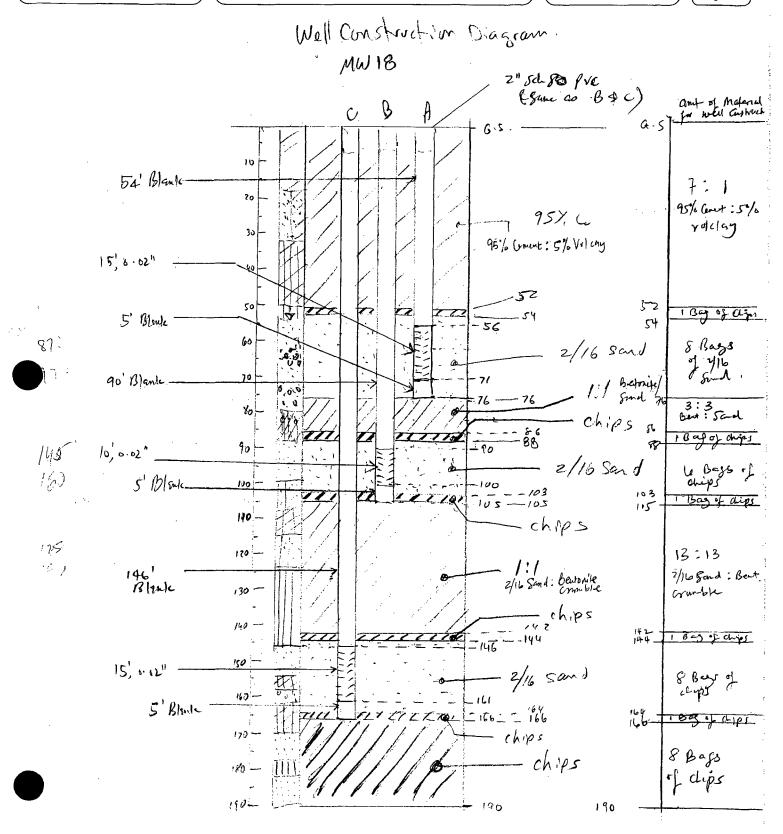
Serial Number: Tool Model: Performed:







SUBJECT: OMGa Chemical OU-2	BY: 6/17/05 DATE:	PAGE
0	CHKD: DATE:	SHEET
JOB NO: (A000646,0001		



ARCADIS LOG OF BORING MW19 Infrastructure, environment, facilities (Page 1 of 4) : May 3, 2006 OVA : MiniRae Omega Chemical Operable Unit 2 **Date Completed** Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller : Ronald Halpern, PG : Core/Simulprobe Checked By Sampling Method **Drilling Company** : WDC Diameter : 6" Drill Ria : Sonic SpeedStar 15K Calibration Gas/Conc : 100 ppm isobutylene Well: MW19 **Blow Count** GRAPHIC Recovery % Elev.: 158.94 Depth OVA Time DESCRIPTION in Feet Lab No. Cover Λ Concrete to ~4". Surface Casing (0.5-5') SILT with Clay, medium stiff, dark yellowish brown (10YR 3/6) to brown Concrete (7.5YR 4/3), slightly moist. ML (5-9' Core) Silt, medium stiff, brown (10YR 4/3), moist, low toughness, low plasticity, low dry strength. (9-11' Core) Poorly graded SAND with Silt to Silty SAND, ~10-20% Silt, ~80-90% fine ·2" Dia. Sch. 80 PVC Blank SP-SM 10 Sand, medium dense, dark grayish brown (10YR 4/2), moist. 95% Portland (11-12' Core) SILT with Sand; ~20% fine Cement/5% Bentonite Sand, ~80% Silt, olive gray (5Y 5/2), slightly Slurry moist, no odor. (12-18' Core) Non plastic SILT, stiff, dark greenish gray (Gley 1 4/2), mottled with light greenish gray (Gley 1 7/1), moist, no ML (18-19' Core) Non plastic SILT, soft, dark greenish gray (Gley 1 4/1), wet, no odor, (bordering fine Sand, max. diameter ~0.05 mm). 20

DESCRIPTION OF BORING LOCATION: In sidewalk on southside of McCann, opposite Bell Ranch Drive.

NOTES: Depth in feet below ground surface (bgs). Continuous core; Elevation noted is ground surface elevation.



(Page 2 of 4)

Inti	rastruo	cture	e, environn	nent,	facilit	ies				(Pa	ge 2 of 4)
			emical Ope No. CA0006				Date C Logged Checke Drilling Drill Ri	l By ed By Comp	: Ronald Halpern, PG Dr : Ronald Halpern, PG Sa any : WDC Di	riller : ampling Method : ameter :	MiniRae Core/Simulprobe 6" 100 ppm isobutylene
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	Well: MW1 Elev.: 158.	
20-				111:15					(19-25') Clayey SILT with Sand: ~5-10% Clay; ~20% very fine Sand, ~70-75% Si hard, very dark grayish brown (10YR 3/1 to 2.5Y 3/2), slightly moist; moderate to toughness, low to moderate plasticity, s dilatency.	ilt; 2 high	
25-					į		ML		(25-30') Non plastic SILT; medium stiff, olive gray (5Y 3/2), moist.	dark	
30-									(30-32') Non plastic SILT; hard to mediu stiff, dark olive gray (5Y 3/2), mottled wi olive brown (2.5Y 4/3), slightly moist to moist.	E it	-2" Dia. Sch. 80 PVC Blank -95% Portland Cement/5% Bentonite Slurry
] -	71/ \I						SP		(32-33) Poorly graded SAND; fine-grain olive gray (5Y 5/2), slightly moist.		
35 —				12:10			ML		(33-33.5') Non plastic SILT: medium stii stiff, dark greenish gray (Gley 1 4/1) mottled with light greenish gray (Gley 1 7/1), moist. (33.5-39) Non plastic SILT bordering ve fine Sand (<0.05 mm diameter); olive gr (5Y 5/2), slightly moist.		
40-	V						SP-SM		(39-46) Poorly graded SAND with Silt: ~10-20% Silt, 80-90% fine Sand (<0.4 n diameter), olive gray (5Y 4/2), slightly m	nm roist.	

DESCRIPTION OF BORING LOCATION: In sidewalk on southside of McCann, opposite Bell Ranch Drive.

NOTES: Depth in feet below ground surface (bgs). Continuous core; Elevation noted is ground surface elevation.

ARCADIS Infrastructure, environment, facilities Omega Chemical Operable Unit 2 **Date Completed** : May 3, 2006 Project No. CA000646.0001 Logged By : Ronald Halpern, PG

LOG OF BORING MW19

OVA

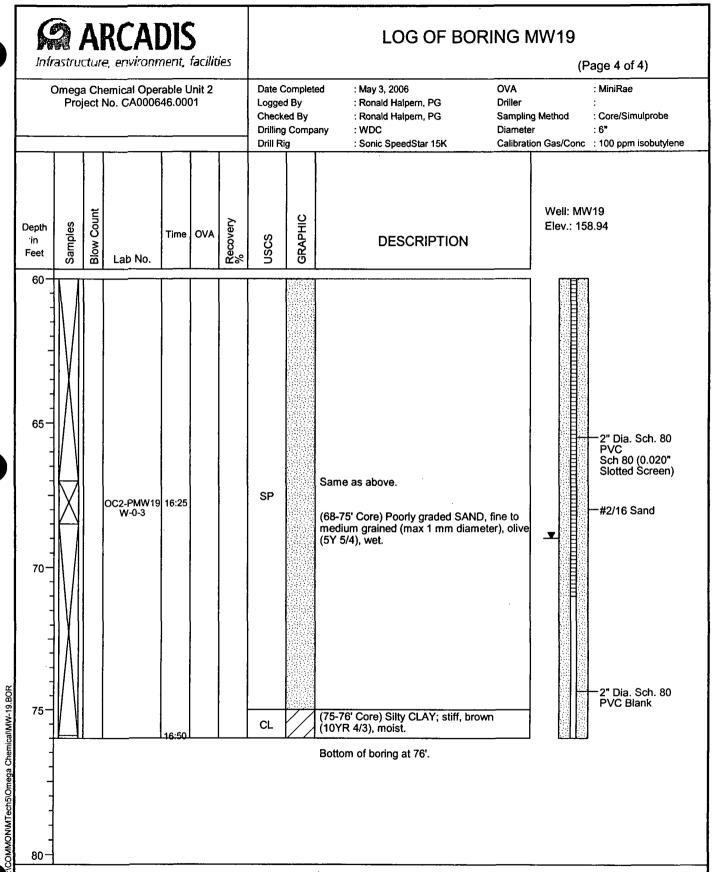
Driller

(Page 3 of 4) : MiniRae

		Project No. CA000040.0001			Check Drilling Drill Ri	ed By Compa	: Ronald Halpern, PG : Ronald Halpern, PG any : WDC : Sonic SpeedStar 15K	Diamete		: Core/Simulprobe : 6" : 100 ppm isobutylene			
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well: MW Elev.: 158	
9.BOR	40				12:05			SP-SM		(46-55' Core) Poorly graded SAND/Silty SAND; cemented ~20% ~60% fine Sand, ~20% medium and Sand (subangular); dark greenish gr (Gley 1 4/1), dry; trace subrounded gravel (to 8 mm diameter)(igneous).	d coarse ray fine		−95% Portland Cement/5% Bentonite Slurry −2" Dia. Sch. 80 PVC Blank
ega Chemical\MW-1	55 - - -				13:05			SW SP-SM		(55-57' Core) Well graded SAND; fir coarse grained (max 4 mm diameter granitic origin; dark gray, wet. (57-58' Core) Poorly graded SAND v	r) of with		#2/16 Sand
OMMON/M ech5/Omega Chemical/MW-19.	60-							SP-SM SP		Silt/Silty SAND: ~10-20% silt, 80-90 to medium grained (max diameter 0 Sand, dark greenish gray (Gley 1 4/ (58-65' Core) Predominantly fine to grained (80-85%), some coarse (10 gray, wet.	% fine .75 mm) 1), wet. medium		-2" Dia. Sch. 80 PVC Sch 80 (0.020" Slotted Screen)

DESCRIPTION OF BORING LOCATION: In sidewalk on southside of McCann, opposite Bell Ranch Drive.

NOTES: Depth in feet below ground surface (bgs). Continuous core; Elevation noted is ground surface elevation.



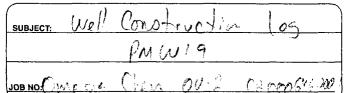
DESCRIPTION OF BORING LOCATION: In sidewalk on southside of McCann, opposite Bell Ranch Drive.

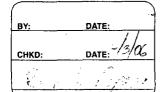
NOTES: Depth in feet below ground surface (bgs). Continuous core; Elevation noted is ground surface elevation.

SAMPLE IDENTIFICATION LOG

Date Time Operable Well Well Well William Sample Symple Sequential Sample Sample Symple Sequential Sample Sample Symple Sequential Sample Sample Sample Symple Sequential Sample S	SAMPLE	IDENTIFICA	ATION LOG	}			•		
Sample Type: 0 - Primary Sample; 1 - Field Duplicate; 2 - Field Blank; 3 - Equipment Blank 4 - Trip Blank; 5 - MS/MSD; 6 - Regulatory Split. 5/2/06	Data	Timo	Operable		Medium	Type ¹	Sequential	Pomarks	
4-Trip Blank; 5-MS/MSD; 6-Regulatory Split. 5/2/06 16:00 OC2 PAW19 W 4 OI Trip 1x40ml 065 365 16:03 OC2 PAW19 W 2 OZ Field Blank 3x40ml 056332-331,-3014 16:05 OC2 PAW19 W O O3 PAW19 C68' 3x40ml 056332, 33,344								L	-
5/2/06 66:00 OC2 PAW19 W 4 OI Tr:p 1x40ml 065 365 16:03 OC2 PAW19 W 2 OZ Field Black 3x40ml 056332-331,-304 16:05 OLZ PAW19 W 0 03 PAW19 C68 3x40ml 056332, 33,34	Sample	yρο. 0 - Επί 1 - 1	nary Sampi Γrin Blank:	e, 1-11eiu 5-1	MS/MSD:	6 - Regula	atory Split	iphient blank	
16:03 OCZ PAWIS W 2 OZ Field Black 3x40ml 056332, 331, -3014	5/2/06	\$ 6.00				1		Tria IX40ml	7065365
16:05 OLZ PAWIA W 0 03 PAWIF @68' 3x 40mt 156332, -33,34	1				1		1		056320-331-301
16:25 ACC AMAR G. 2 O. Gamp Bla 1:27 to a control of the control o				_			T		
	 			Parties				PAWIT (CBS 32 MINISTER)	1056356, 32,37
		16.63	G.C.C.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 6J	<u> </u>	0 0,	13 10 10 10 10 10 10 10 10 10 10 10 10 10	- COSEDAN - 12 - 1
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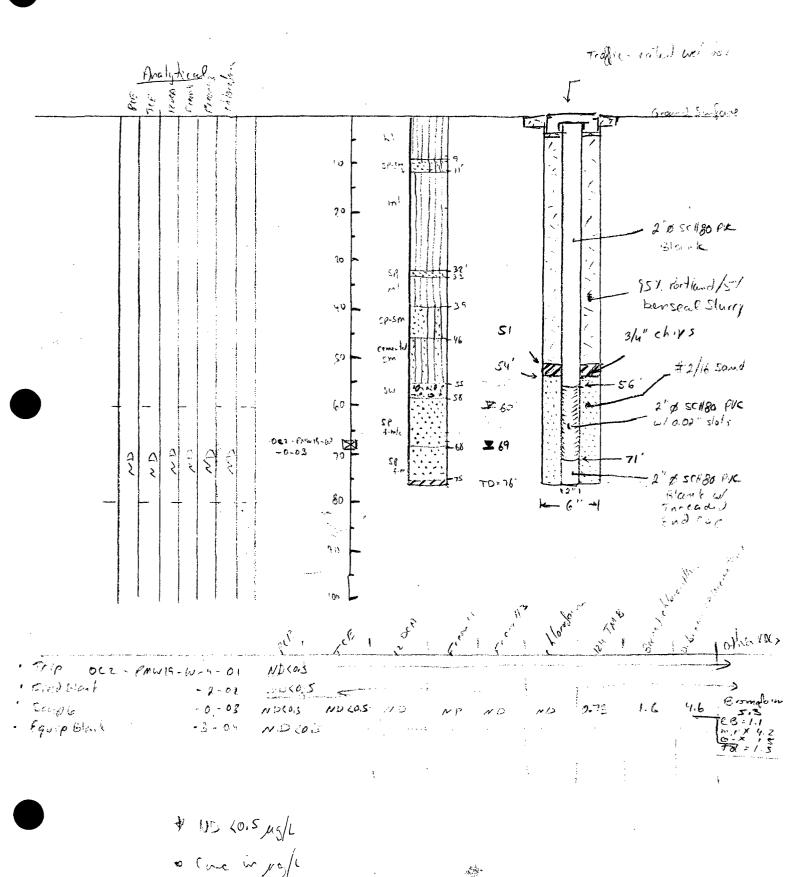








PAGE





Infrastructure, environment, facilities (Page 1 of 8) : May 22, 2006 OVA : MiniRae Omega Chemical Operable Unit 2 **Date Completed** Project No. CA000646.0001 : Jeremy Cook Driller Logged By Checked By : Ronald Halpern Sampling Method : Core/Simulprobe **Drilling Company** : WDC Diameter : 10" Drill Rig : SpeedStar 30K Mud Rotary Calibration Gas/Conc : 100 ppm isobutylene Well1: MW-20A Well2: MW-20B Well3: MW-20C Blow Count GRAPHIC Recovery Elev.: 141.99 Samples Depth OVA Time in DESCRIPTION Feet Lab No. Cover 0. SILT/SILT with Sand and Gravel, ~10-15% Surface medium to coarse sand and fine gravel Casing (1-10 mm diameter) reddish brown, dry. ML (8') Same as above. 10 95% Portland Cement/5% Benseal Poorly graded SAND; predominantly very fine and fine-grained ~3-5% medium to coarse sand, ~3-5% fine gravel (to 10 mm diameter); reddish brown, slightly moist. 2" Dia Sch 80 PVC Blank SP 15 OMMON\MTech5\Omega Chemical\MW-20.BOR Well graded SAND, fine to coarse, subrounded grains (max 5 mm diameter). 20 SW

PMW-20 is in th sidewalk on east side of Geary Road in Santa Fe Springs, adjacent to the southwest corner of Cascade Water Pumps facility. Directly to the east is a oil field with 6 wells.



(Page 2 of 8)

Omega Chemical Operable Unit 2 **Date Completed** : May 22, 2006 OVA : MiniRae Project No. CA000646.0001 : Jeremy Cook Logged By Driller Checked By : Ronald Halpern : Core/Simulprobe Sampling Method **Drilling Company** : WDC Diameter : 10' Drill Rig : SpeedStar 30K Mud Rotary Calibration Gas/Conc : 100 ppm isobutylene Well1: MW-20A Well2: MW-20B Well3: MW-20C Blow Count GRAPHIC Recovery Elev.: 141.99 Depth Time OVA DESCRIPTION in Feet Lab No. 25 SW 30 Poorly graded SAND: medium to coarse, poorly graded, subangular-subrounded. 35 95% Portland Cement/5% Benseal 2" Dia Sch 80 PVC Blank 40 SP Ended 5/17/06. 45 Poorly graded SAND with GRAVEL, fine to medium sand;, appears to be increasing in moisture content.

PMW-20 is in th sidewalk on east side of Geary Road in Santa Fe Springs, adjacent to the southwest corner of Cascade Water Pumps facility. Directly to the east is a oil field with 6 wells.



(Page 3 of 8)

	10242	สรนนเ	ur	е, епинани	ierii, re	Ciitue	±3	S				(Pa	ige 3 o	f 8)
		Omega Chemical Operable Unit 2 Project No. CA000646.0001						Date Co Logged Checke Drilling Drill Rig	By d By Compa	: Jeremy Cook : Ronald Halpern	OVA Driller Sampling Diameter Calibratio	Method	: 10"	mulprobe
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well1: M\ Well2: M\ Well3: M\ Elev.: 141	V-20B V-20C	
	50— - -			-										
	55-							SP		·				−95% Portland
	60-							CL-ML		SILTY CLAY with Sand: medium to c sand and fine gravel, gravel is subroi (max 10 mm diameter). SILTY CLAY, dark gray, passes ribbe	unded,			Cement/5% Benseal
~	65 —							ML		test. SILT with CLAY.				-2" Dia Sch 80 PVC Blank
COMMON\MTech5\Omega Chemica\\MW-20.BOR	70			OC2-PMW20 W-0-1				SP-SM		(Driller notes chatter at 71'). Poorly graded SAND, fine-grained (0 mm diameter), some silt, wet.	0.1-0.5			- Medium Bentonite Chips - Transition Sand -#2/12 Sand
SOMMC	75 -													

PMW-20 is in th sidewalk on east side of Geary Road in Santa Fe Springs, adjacent to the southwest comer of Cascade Water Pumps facility. Directly to the east is a oil field with 6 wells.

			e, <i>environm</i> emical Oper			=22	Date Co	omplete	ed : May 22, 2006	OVA	· · · · · · · · · · · · · · · · · · ·	ge 4 o MiniRae	
	Proj	ect N	lo. CA0006	46.0001	!		Logged Checke Drilling Drill Rig	d By Compa	: Jeremy Cook : Ronald Halpern	Driller Sampling Diameter Calibration		10 "	mulprobe n isobutylene
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well1: MW Well2: MW Well3: MW Elev.: 141.	/-20B /-20C	
75 —			OC2-PMW20 W-1-2 OC2-PMW20 W-0-3				SP-SM		Poorly graded SAND with Silt; fine-gwet.	rained,			- 2" Dia PVC Sch 80 (0. Slotted Sc -#2/12 San -2" Dia Sch PVC Blank
95 -							MŁ	30	Non plastic SILT, dark olive brown, n	noist.			End Cap 1:1 Bentor Crumble/ Sand #3

				RCAI			·			LOG OF BORIN	NG MV			
		Omega	a Ch	e, environn emical Oper No. CA0006	able Ur	nit 2	<u></u>	Date Co Logged Checke Drilling Drill Rig	By d By Compa	: Jeremy Cook : Ronald Halpern : WDC	OVA Driller Sampling M Diameter Calibration	fethod	10"	
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well1: M\ Well2: M\ Well3: M\ Elev.: 141	V-20B V-20C	
	100-	X		OC2-PMW20 W-0-6	16:40 Resume 5/19/06			ML SP-SC		Poorly graded SAND with Clay, fine-grained.		(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)		
	105-					; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;		SP		Chatter from ~105-110, possible Grav	vel.			—1:1 Bentonite Crumble/ Sand #3 —2" Dia Sch 80
	- - - -	X		OC2-PMW20 W-0-08	9:30					(111-113' Simulprobe) Poorly graded fine-grained, olive (5Y 4/3), wet, no of (113' Shoe) SILTY CLAY, medium sti	dor.	第五卷 12 第 2 第 2 第 2 第 2 第 2 第 2 第 2 8 第 2 8 3 2 8 3 2 8 3 2 8 3 2 8 3 2 8 3 2 8 3 2 8 3 2 8 3 2 8 3 2 8 3 2 8 3	andadadada Esterado	PVC Blank —2" Dia Sch 80 PVC Blank
	115 - - - -							CL		stiff, yellowish brown (10YR 5/4), mois wet, moderately tough, moderate plas medium dilatency, high dry strength, a odor.	sticity,	E TATATA		Madium
OMMONIMTech5\Omega Chemical\MW-20.BOR	120 —			OC2-PMW20 W-0-11	10:10 11:35			SP		(117' Off mud return), SAND, poorly graded, predominantly fine to medium-grained. (122-123' Simulprobe) Poorly graded ~3-5% Silt, ~95-97% predominantly fine graded for the same standard for the sam	ine to			— Medium Bentonite Chips —#2/12 Sand —2" Dia PVC
OMMONIMTech 5	- - - 125									medium Sand (~0.1-2 mm diameter), coarse Sand (max 5 mm diameter), o (5Y 4/3), saturated, sand subrounded ~10-20% mafic minerals, ~60-70% qu ~20-30% plags.	olive J,			Sch 80 (0.020" Slotted Screen

PMW-20 is in th sidewalk on east side of Geary Road in Santa Fe Springs, adjacent to the southwest corner of Cascade Water Pumps facility. Directly to the east is a oil field with 6 wells.

				RCAI						LOG OF BOR	ING N			
*		Omega	a Ch	e, <i>environn</i> nemical Oper No. CA0006	rable Uı	nit 2	€S 	Date Control Logged Checked Drilling	By d By Compa	: Jeremy Cook : Ronald Halpern	Diameter	g Method :	10"	ae Simulprobe
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	USCS	GRAPHIC	DESCRIPTION		Well1: MW Well2: MW Well3: MW Elev.: 141	/-20A /-20B /-20C	
	125							SP		(Off mud retum at ~127'): Poorly gra SAND - as above.	aded			—2" Dia PVC Sch 80 (0.020' Slotted Screer
	130	\bigvee		OC2-PMW20 W-0-12	12:00 13:35			sw		(130-133' Simulprobe) Well graded ~3-5% Silt, fine to coarse Sand (95' trace fine gravel (max 10 mm diame subrounded, ~25% mafic, ~50-70% 15-25% plag and other, saturated, r	%), eter), quartz, no odor.			-#2/12 Sand -2" Dia Sch 80 PVC with
	135— - -							SP-SM		(133' in Shoe) Poorly graded SAND SILT, ~5-10% Silt, 90-95% fine grai sand, olive (5Y 4/3), wet.) with ined			Threaded End Cap
al/MW-20.BOR	140	M		OC2-PMW20 W-0-14	14:25 5/19/06 5/22/06			ML-SM		SANDY SILT, possible change to S mud return. (142-143' Simulprobe) Poorly grade non-plastic SILT/SILTY SAND, ~40-60-40% fine Sand, (max diametge mm), olive gray (5Y 4/2), with strong brown (7.5Y 4/6 to 5/6) oxidation sta	ed Sandy -60% Silt rr ~0.3 g aining		ala kada da kada da kada da kada da kada da kada da kada da kada da kada da kada da kada da kada da kada da ka Bada kada da kada da kada da kada da kada da kada da kada da kada da kada da kada da kada da kada da kada da k	—2" Dia Sch 80 PVC Blank —1:1 Bentonite Crumble/ Sand #3
Tech5\Omega Chemical\MW-20.BOR	145									(148-149' Mud Return) Well graded fine to coarse grained (max diamete mm), ~20-30% mafic, 20-30% plag, ortho, 35-55% quartz, subangular, speckled black, white, olive brown,	er 5			

PMW-20 is in th sidewalk on east side of Geary Road in Santa Fe Springs, adjacent to the southwest corner of Cascade Water Pumps facility. Directly to the east is a oil field with 6 wells.

sw

Elevation noted is ground surface. A = Shallow; B = Intermediate; C = Deep

150-



(Page 7 of 8)

	Inti	rastrud	ctur	e, environm	nent, fa	aciliti	es				(Page 7 of 8)
	(Omega Proj	a Ch ject	nemical Oper No. CA0006	able Ur 46.000	nit 2 1		Date C Logged Checke Drilling Drill Rie	l By ed By Compa	: Jeremy Cook Driller : Ronald Halpem Samplir ny : WDC Diamete	: MiniRae : g Method : Core/Simulprobe er : 10" ion Gas/Conc : 100 ppm isobutylene
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	Well1: MW-20A Well2: MW-20B Well3: MW-20C Elev.: 141.99
	150 — - - - -	M		OC2-PMW20 W-0-16	9:15			sw			
	155			OC2-PMW20 W-1-17	9:15			·		(Shoe of Simulprobe and mud return) (153') CLAY with Sand, lean, ~10-20% fine to medium Sand, ~80-90% Silty Clay, dark greenish gray (Gley 1 4/1), wet.	
	160	\bigvee			9:50 11:32		None	ML		(161.5-162.5' Simulprobe) SILT with Clay, hard, dark greenish grey (Gley 1 4/1), moist, moderately plastic.	—1:1 Bentonite
0.BOR	165			21				CL		(162.5-163') Silty CLAY, hard, dark greenish gray, moist, moderately plastic. At 168' off mud return - same as above.	Crumble/ Sand #3 — 2" Dia Sch 80 PVC Blank
G:\COMMON\MTech5\Omega Chemica\\MW-20.BOR	170				13:35		None	ML		(171.5-173 Simulprobe) SILT with Clay, stiff (fingernail impression), dark greenish gray (Gley 1 4/1), moist, low plasticity.	
1.CO)	175	0 ia ia i	ا : م حا		-1464		D-c-1	n Samta T	. C	rs, adjacent to the southwest	u <u>kateateattat</u>

PMW-20 is in th sidewalk on east side of Geary Road in Santa Fe Springs, adjacent to the southwest corner of Cascade Water Pumps facility. Directly to the east is a oil field with 6 wells.

				RCAI					-	LOG OF BOR	ING M	IW20		
		Omega	a Ch	e, environm emical Oper No. CA0006	able Ur	nit 2	es 	Date Co Logged Checke Drilling Drill Rig	By d By Compa	: Jeremy Cook : Ronald Halpern	OVA Driller Sampling Diameter Calibratio	Method	: 10"	
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well1: M Well2: M Well3: M Elev.: 14	W-20B W-20C	
	175 — - - - - -							ML						—1:1 Bentonite Crumble/ Sand #3
	180			OC2-PMW20 W-0-18	14:26 15:47					(181.5-183 Simulprobe) Poorly grad SAND, ~3-5% Silt, ~95-97% fine to Sand (max 2 mm diameter), dark g gray to dark greenish black (Gley 1 2.5/1), wet.	medium reenish			−2" Dia Sch 80 PVC Blank
	185							SP		At 187' off mud return - same as ab	oove.			—2" Dia PVC Sch 80 (0.020' Slotted Screen —#2/12 Sand
cal\MW-20.BOR	190-	M			16:25			SM CL	ŢĮŢ	(194-194.75' Simulprobe) Well grad SAND w/gravel and clay, ~20-25%	led Silty coarse			—2" Dia Sch 80 PVC with Threaded End Cap
MMON/MTech5\Omega Chemic	At 193 off mud return - same as above. SM (194-194.75' Simulprobe) Well graded Si										e to sh gray 10% matrix,			

PMW-20 is in th sidewalk on east side of Geary Road in Santa Fe Springs, adjacent to the southwest corner of Cascade Water Pumps facility. Directly to the east is a oil field with 6 wells.

,			Ónosahi-	Mall	Sampled Medium	Sample Type ¹	Commentat		
	Date	Time	Operable Unit	Well Location	(Water or Soil)	(0 thru 6)	Sequential Sample No.	Remarks	·
					Duplicate; 2 - I		1 .	uipment Blank	
			rip Blank;		MS/MSD;		atory Split.		
VI									
	5/18/06	1155	062	PMIN-20	water	0	1	43! cont. id: 055417	-19 040
->	5/18/04	#3 Ba	062	pnuso	البا البا	ı	2	\$3' Dup" : 055420	
	5/18/00	1300	ocz	PINNZO	W	0	3	83 11 11:055423	
)	5/18/00		002	pmwzo		4	J	Trir BLALL 055426	
	5/18/04	1530	062	PHUNO	تبرا	D -	4	93' " ":05-427- 25	CA HOME
dided	5/18/06	1640	002	PAW20	w	v	C	103' 655430-32	Statemen
8	5/19/06	\$8:00	002	PMW20	W	ч	07	TOP (KHOW)	085386?
clary	1	09:30	00.7	PM4120	W	/2	28		025 436 / 27 025 436 / 27
		09:40	OC 1-	PHIURO	W	2	09		032 142, - 43.
	1	09:55	002	PMW20	w	3	10		e 139 0
:		11:35	002	PMLUBE	42	0	11		osinka, m
i	1,	13:35	OC 2	PMW10	61	0.	17		035948,-99
	. 1	15,30	06.2	PMW20	W	4	13		065421?
		15,35	∞ 2	PMW20	ω	0	14		
	5/21/05	08:00	001	PMW20	\sim ω	4		i	055 150 -51
	3/01/103	09714	067	PMW20	w	0	15		065 36/ 055953 -54
		09:15		3	ω		17		
		11/32-	or ?	PMWID		1 :-	- /	2162-110 Perovery	022 126, -27
		13'45	0(2	8MUIZO				OTB' Up convery	
		15147	DCS.	RIMMAN	(L)	0	78	Q183 3X40m1 800	055459, -60
,		17:35	002	PMYRO	V	3	1 4		255462 -6
		1,1,2,0	V.C. C.,	17.14 (0		A 1 1 1 1 1	10.0	6.147	and the control of
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- 1	₩, 13. yz.,								

PACIFIC SURVEYS

ELECTRIC LOG LATEROLOG 3 GAMMA RAY

Job No.						
12550	Company	WDC	EXPLORA	TION & WEI	LLS	
	Well	MW-2	0			
	T :-1-1	CANIT	• • EE ODD!	NOO		
File No.	Field	SANT	A FE SPRI	NGS		•
1110110.	County	LOS A	NGELES	State	CA	
Location:					Other Serv	ices:
GEARY NORTH OF TEL	EGRAPH				GR/LL3 CALIPER	
Sec.	Twp.		Rge.			
Permanent Datum Log Measured Front Drilling Measured	om G.	L.	0'	Elevation above perm. date	um	Elevation K.B. D.F. G.L.
Date		05-22-	06	T		
Run Number		ONE				
Depth Driller		195'				
Depth Logger		194'				
Bottom Logged II	nterval	194'				· · · · · · · · · · · · · · · · · · ·
Top Log Interval		20'				
Casing Driller		10 3/4	' @ 18'			
Casing Logger		18'				
Bit Size		9 5/8"				
Type Fluid in Hole	•	BENT	ONITE			•
Density / Viscosit	у	N/A				
pH / Fluid Loss		N/A				
Source of Sample	9	PIT				
Rm @ Meas. Te	mp	6.5 @	77F			
Rmf @ Meas. Te	mp	5.5 @	77F			
Rmc @ Meas. Te	emp	N/A				
Source of Rmf /	Rmc	MEAS		·		
Rm @ BHT		N/A				
Time Circulation S	Stopped	1 HOU	R			<u> </u>
Time Logger on E		18:15				
Max. Recorded T	emperature	N/A				
Equipment Numb	er	PS-2				
Location		L.A.				
Recorded By		LAPOR	RTE			

R. HALPERN

Witnessed By

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or wilful negigence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions be outlined by anyone resulting from any interpretation made by any of our our current Price Schedule.

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ELOG Calibration Report **D1** DТФ Comments Serial: Model:

Snop Calibration Performed: **Before Survey Verification Performed:** After Survey Verification Performed:

IVION May US 11:28:24 2005 Tue Nov 01 10:40:07 2005 Tue Nov 01 10:40:55 2005

Shop Calibration

Readings		teadings References		Res		ılts		
	Zero	Cal		Zero	Cal		Gain	Offset
Short	8.241	99.640		10.200	102.200	Ohm-m	1.007	1.904
Long	7.417	96.821		10.200	102.200	Ohm-m	1.029	-17.567
IEE	112.580	4730.241	counts	0.123	5.177	. A		
VSN	9.477	5293.988	counts	0.181	100.976	V		
VLN	214.205	1417.736	counts	4.086	27.042	V		

Before Survey Verification

Readings			References			Results		
	Zero	Cal		Zero	Cal		Gain	Offset
Short Long	3.487 459.648	99.562 106.407		7.493 106.708	99.615 106.708	Ohm-m Ohm-m	0.959 1.616	4.149 -65.206
IEE VSN VLN	100.500 3.938 129.750	4601.588 5147.255 1375.294	counts counts counts	0.110 0.075 2.475	5.036 98.178 26.232	A V V		

After Survey Verification

Readings			Referer	nces		Results		
	Zero	Cal		Zero	Cal		Gain	Offset
Short	3.135	99.567		3.487	99.562	Ohm-m	0.996	0.363
Long	459.914	106.431		106.407	106.407	Ohm-m	0.999	0.049
IEE	100.253	4590.159	counts	0.110	5.023	Α		
VSN	3.532	5134.748	counts	0.067	97.939	V		
VLN	129.506	1372.178	counts	2.470	26.173	V		

After Survey Verification compared to Before Survey Calibration

	Zer	o	Ca			
	Before	After		Before	After	
Short Long	7.493 677.412	3.487 459.648	Ohm-m Ohm-m	99.615 106.708	99.562 106.407	Ohm-m Ohm-m

^		\sim		_ D
Gamma	Rav		mano	пкопоп

Serial Number: Tool Model: Performed:	D1 ELOG Mon May 08 11	:27:22 2006
Calibrator Value:	162	GAPI
Background Reading: Calibrator Reading:	167.616 722.887	cps cps
Sensitivity:	0.291746	GAPI/cps

Database File:

12550.db

Dataset Pathname:

WDC/MW20/run1/ELOG

Presentation Format: ELOG2

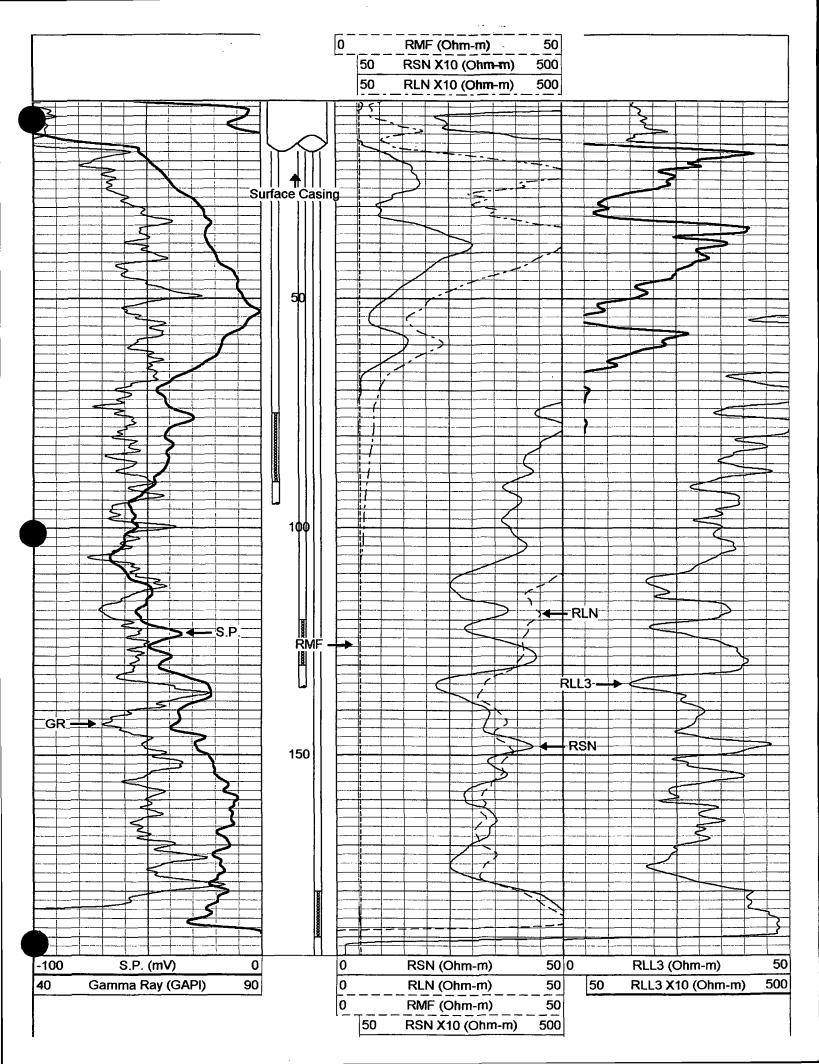
Dataset Creation:

Mon May 22 18:07:20 2006 by Log 6.0

Charted by:

Depth in Feet scaled 1:240

-100	S.P. (mV)	0	0	RSN (Ohm-m)	50 0		RLL3 (Ohm-m)	50
40	Gamma Ray (GAPI)	90	0	RLN (Ohm-m)	50	50	RLL3 X10 (Ohm-m)	500



50 RLN X10 (Ohm-m) 500

PACIFIC SURVEYS

Witnessed By

LATEROLOG 3 GAMMA RAY

						1	
Job No.						\dashv	
12550	Company WDC EXPLORATION & WELLS						
	Well	MW-20				İ	
	Field	SANTA FE S	SPRINGS				
File No.							
	County	LOS ANGEL	.ES State	CA			
Location:				Other Serv	rices:		
GEARY NORTH OF TEL	LEGRAPH			GR/ELOG CALIPER	1		
Sec.	Twp.		Rge.				
Permanent Datun	n G.	L.	Elevation		Elevation	7	
Log Measured Fr	rom G.	.L. 0'	above perm. da	atum	K.B.		
Drilling Measured	l From G.	L.			K.B. D.F. G.L.		
Date		05-22-06			· Lu · · · · · · · · · · · · · · ·	7	
Run Number		ONE				1	
Depth Driller		195'					
Depth Logger		194'				1	
Bottom Logged I	nterval	194'					
Top Log interval		20'					
Casing Driller		10 3/4" @ 18'				7	
Casing Logger		18'				٦	
Bit Size		9 5/8"				٦	
Type Fluid in Hol	e	BENTONITE				\neg	
Density / Viscosil	ty	N/A				7	
OH / Fluid Loss		N/A					
Source of Sample	e	PIT					
Rm @ Meas. Te	:mp	6.5 @ 77F				7	
Rmf @ Meas. Te	mp	5.5 @ 77F					
Rmc @ Meas. Te	emp	N/A					
Source of Rmf /	Rmc	MEAS					
Rm @ BHT		N/A					
Fime Circulation	Stopped	1 HOUR				$\exists_{\hat{A}}$	
Time Logger on E		18:15				<<< Fold Here >>>	
Max. Recorded T	emperature	N/A				<u>`</u>	
Equipment Numb	er	PS-2				<u> </u>	
_ocation		L.A.				그유	
Recorded By		LAPORTE				*	
Witnessed By		R. HALPERN					

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

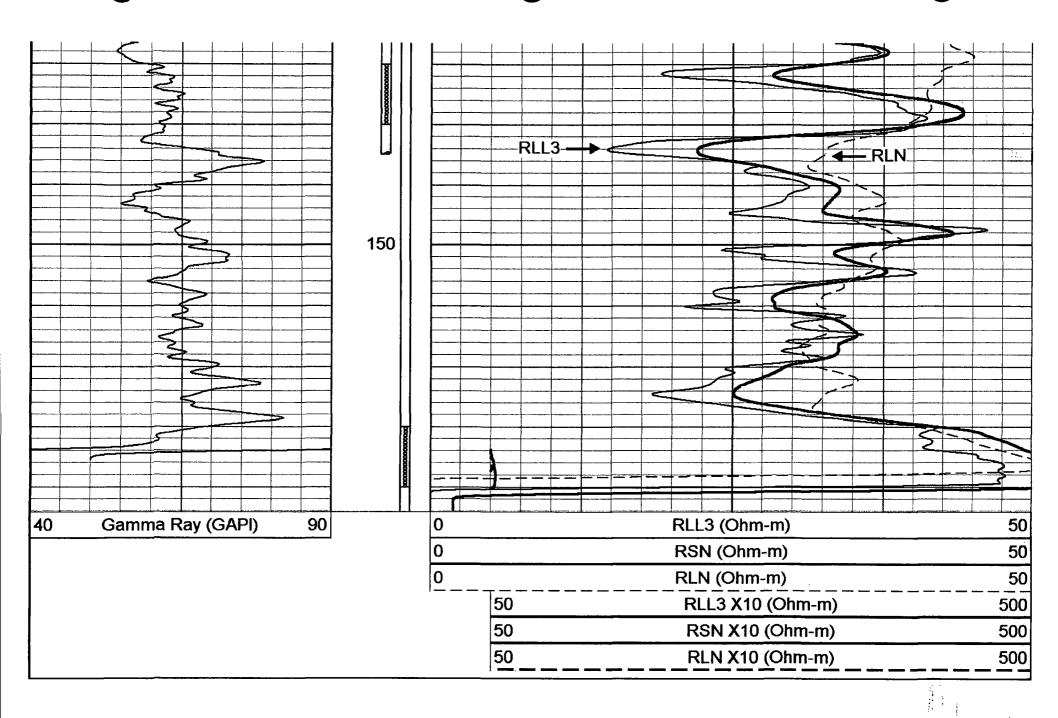
Comments

Gamma Ray Calibration Report

Serial Number: Tool Model: Performed:

13 GROH Mon May 08 11:30:05 2006

192 **GAPI** Calibrator Value: Background Reading: 31,1611 Calibrator Reading: 205.072 Sensitivity: 0.931511 GAPI/ Simplec Long Guard Calibration Report Serial Number: 81 Tool Model: M&W Performed: Mon May 08 11:29:51 2006 System Reading Calibration Reference 0.310 2.500 Ohm-m 5.000 0.628 6.054 50.000 28.969 250.000 56,732 500,000 Database File: 12550.db WDC/MW20/run1/LL3F Dataset Pathname: Presentation Format: **GUARD** Dataset Creation: Mon May 22 18:52:00 2006 Charted by: Depth in Feet scaled 1:240 Gamma Ray (GAPI) 90 50 40 0 RLL3 (Ohm-m) 0 50 RSN (Ohm-m) 0 **5**0 RLN (Ohm-m) 500 50 RLL3 X10 (Ohm-m) 50 500 RSN X10 (Ohm-m) 50 RLN X10 (Ohm-m) 500 **Surface Casing** RSN Gamma Ray



PACIFIC SURVEYS

CALIPER BOREHOLE VOLUMES

Job No. 12550	Company	WDC	EXDI ORA	TION & WE	119				
12550	•	VVDC	AADO EVI FOLVALIOIA & AAFEFO						
	Well	MW-2	0						
	Field	SANT	ANTA FE SPRINGS						
File No.	County	LOS A	NGELES	State	CA				
Location:					Other Serv	ices:			
GEARY NORTH OF TEL	EGRAPH				GR/ELOG LL3				
Sec.	Twp.		Rge.						
Permanent Datum	G.	L.		Elevation		Elevation			
Log Measured Fro	_	Ĺ.	0'	above perm. dat	um	K.B.			
Drilling Measured	From G.	L.				K.B. D.F. G.L.			
Date		05-22-	06			<u> </u>			
Run Number		ONE				· · · · · · · · · · · · · · · · · · ·			
Depth Driller		195'							
Depth Logger	· · · · · · · · · · · · · · · · · · ·	194'	194'		***				
Bottom Logged In	nterval	194'	194'						
Top Log Interval		0'							
Casing Driller		10 3/4	'@ 18'						
Casing Logger		18'							
Bit Size		9 5/8"							
Type Fluid in Hole)	BENT	ONITE						
Density / Viscosit	y	N/A							
pH / Fluid Loss		N/A							
Source of Sample)	PIT							
			77F						
			77F						
Rmc @ Meas. Temp									
Source of Rmf / Rmc		MEAS							
Rm @ BHT		N/A							
Time Circulation S		1 HOU	R						
Time Logger on E	lottom	18:15							
Max. Recorded To	emperature	N/A							
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Location		L.A.							
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R. HALPERN

Witnessed By

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

XY Caliper Calibration Report

Serial Number: Tool Model: Performed:

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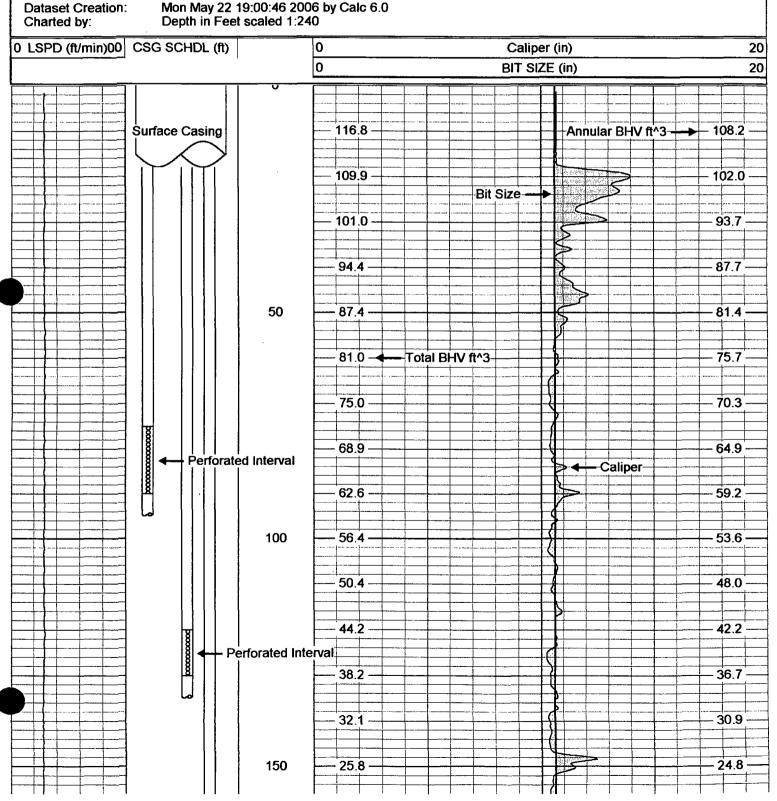
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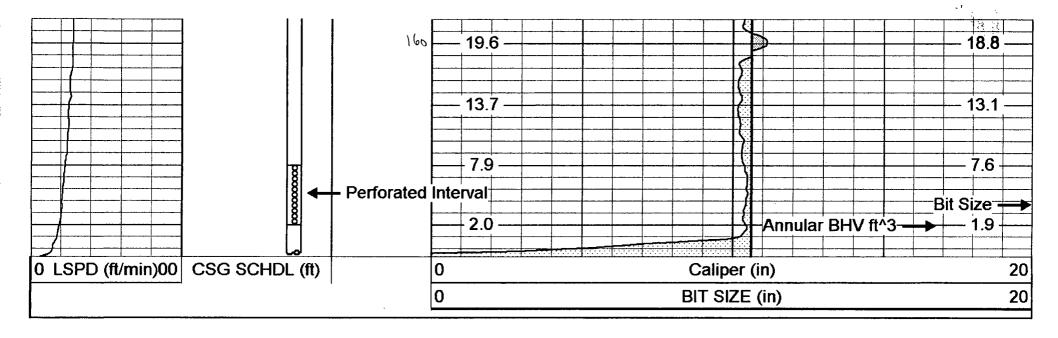
Small Ring: 14.5 in 24.5 Large Ring: in X Caliper Y Caliper #22.5. . . . Reading with Small Ring: 1191.6 1191.6 cps Reading with Large Ring: 1718.6 1718.6 cps Gain: 0.0189753 0.0189753 Offset: -8.11101 -8.11101

Database File: 12550.db

Dataset Pathname: WDC/MW20/run1/LL4.1

Presentation Format: XYC





ARCADISDaily Log

MW20

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ARCADIS LOG OF BORING MW21 Infrastructure, environment, facilities (Page 1 of 4) : MiniRae Omega Chemical Operable Unit 2 **Date Completed** : May 1, 2006 OVA : Rivera Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller Checked By Sampling Method : Core/Simulprobe : Ronald Halpern, PG **Drilling Company** : WDC Diameter : 6" Drill Ria Calibration Gas/Conc : Sonic SpeedStar 15K : 100 ppm isobutylene Well: MW21 **Blow Count** GRAPHIC Recovery % Elev.: 128.91 Depth OVA Time DESCRIPTION in Feet Lab No. Cover 0 Grass surface to ~6". Surface Casing (0.5-3'): SAND and SAND with SILT; ~5-10% silt, 90-95% fine to medium sand, gray (5Y 5/1), moist, strong petroleum odor. (3-3.5'): Asphaltic layer, possibly remnant of oil field road (extensive laterally). SAND - same as above, crude petroleum SP-SM >4000 10 95% Cement/ 5% Benseal Slurry 2" Dia Sch 80 (12.5-13.5'): SILT, soft, black (5Y 2.5/1), wet, strong petroleum odor, ~3-5% organic >4000 ML PVC Blank (wood chips) debris. (Fill ?). SP-SM (13.5-15'): Poorly graded SAND with Silt, ~5-10% silt, 90-95% fine to medium sand, 15 gray (5Y 5/1), moist, petroleum odor. ML (15-17'): SILT, soft, black (5Y 2.5/1), wet, 4000 low to moderate odor, peat and wood chips ~16.75 ft. (Fill ?). (17-25'): Well graded SAND with Gravel, OMMON\MTech5\Omega Chemical\MW-21.BOR -70% fine to coarse sand, subrounded, ~30% fine and coarse subrounded igneous 50 gravel (max 60 mm diameter), dark yellow brown (10YR 3/6), moist. 10:30 20

DESCRIPTION OF BORING LOCATION: On west side of Pioneer Blvd., in green belt in front of 9929 Pioneer Blvd., ~4 feet from curb.

SW



Omega Chemical Operable Unit 2 Project No. CA000646.0001 Depth See See See See See See See See See Se		3366	1. 1. 43 4	., CINKOIRI	nein, ie	CHIC	,					(Ρ	age 2 of 4)
Depth of the part								Logged E Checked Drilling C	By By	: Ronald Halpern, PG : Ronald Halpern, PG : WDC	Driller Sampling Me Diameter		: Rivera : Core/Simulprobe : 6"
SW-SM 36-38'): Well graded SAND with Gravel, subangular, cemented, hard, light olive brown (2.5Y 5/4), dry. 95% Cement/ 5% Benseal Survey (1.5 mg and 1.5 mg and	in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION			
DESCRIPTION OF BORING LOCATION: On west side of Pioneer Blyd., in green belt in front of 9929	35-							SW CL-CH SP		~5% fine subangular gravel (ma diameter), ~15% silt, ~80% fine sand, (maximum 5 mm diamete subangular, cemented, hard, light brown (2.5Y 5/4), dry. (36-38'): Well graded SAND with ~20% predominantly fine subangular gravel (max 8 mm diam fine to coarse sand (max 5 mm diam fine to coarse sand (max 6 mm diam fine to coarse sand (ma	x 15 mm to coarse r), ht olive n Gravel, gular, eter), ~80% diameter), f, olive some black re ribbon latency, ine-grained, 7 5/3), d SAND to coarse eous		5% Benseal Slurry 2" Dia Sch 80

Pioneer Blvd., ~4 feet from curb.



Infrastructure, environment, facilities (Page 3 of 4) **Date Completed** : May 1, 2006 OVA : MiniRae Omega Chemical Operable Unit 2 Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller : Rivera Checked By : Ronald Halpern, PG Sampling Method : Core/Simulprobe **Drilling Company** : WDC : 6" Diameter Drill Rig : Sonic SpeedStar 15K Calibration Gas/Conc : 100 ppm isobutylene Well: MW21 Blow Count GRAPHIC Recovery % Elev.: 128.91 Depth OVA Time uscs in DESCRIPTION Feet Lab No. 50 12:50 ML-SM (50.5-52'): Well graded Silty SAND, ~20% SM silt, 70-75% fine to coarse rounded Sand (max 5 mm diameter), ~10% fine rounded igneous Gravel, dense, olive brown (2.5Y SP 4/3), wet (due to cleanout water), w/black 95% Cement/ org staining (no odor) 5% Benseal Slurry (52-54'): Poorly graded SAND, ~3-5% fine 55 CL and coarse subrounded igneous Gravel (max 70 mm diameter), brown (7.5YR 5/4), ML-SP (54-56'): Interbedded CLAY and CLAYEY ·2" Dia Sch 80 PVC Blank SAND (with iron staining), clay stiff (<1/4" penetration). (56-57'): SILT/Poorly graded SAND. (57-58'): Poorly graded SAND, fine to medium grained (maximum 1 mm diameter brown. 60 SP 65 ____ Wet at 66 feet. 15:00 #2/12 Sand Pack (68-69' Split Spoon): Well graded SAND, SW -3-5% silt, 95-97% fine to coarse sand 5/1/06 (maximum 5 mm diameter), subrounded, 2" Dia Sch 80 dense, yellowish brown (10YR 5/4), wet, OC2-PMW21 W-0-03 PVC w/0.02" 70 8:15 occasional subangular to subrounded Slotted Screen igneous fine and coarse gravel (maximum .28 mm diameter). SP (69-76'): Poorly graded SAND, ~3-5% subangular to subrounded, igneous, fine to coarse gravel (maximum 50 mm diameter), 95-97% fine to medium sand (maximum 1.5 mm diameter), yellow brown (10YR 5/4), wet.

DESCRIPTION OF BORING LOCATION: On west side of Pioneer Blvd., in green belt in front of 9929 Pioneer Blvd., ~4 feet from curb.



(Page 4 of 4) Omega Chemical Operable Unit 2 **Date Completed** : May 1, 2006 OVA : MiniRae Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller : Rivera Checked By : Ronald Halpern, PG : Core/Simulprobe Sampling Method **Drilling Company** : WDC : 6" Diameter Drill Rig : Sonic SpeedStar 15K Calibration Gas/Conc : 100 ppm isobutylene OC2-PMW21 W-0-03 8:15 Well: MW21 Blow Count GRAPHIC Recovery % Elev.: 128.91 Depth Time OVA DESCRIPTION in Feet Lab No. 75 SP (76-78.5'): Well graded SAND with Gravel, ~3-5% Silt, ~15-20% fine subrounded 2" Dia Sch 80 OC2-PMW21 9:55 (granitic) gravel (max 8 mm diameter), SW PVC w/0.02" ~75-80% fine to coarse sand, grayish brown (10YR 5/2), wet. Slotted Screen #2/12 Sand Pack (78.5-81'): Poorly graded SAND, fine grained (maximum 0.5 mm), olive brown 80-SP (2.5Y 4/3), wet. 2" Dia Sch 80 (81-85.5'): Non plastic SILT, medium stiff, PVC Blank light olive brown (2.5Y 5/4), moist, low to toughness, low plasticity, moderate dilatency, low dry strength. ML Medium Chips Threaded End Cap 85 SP-SM (85.5-86'): Poorly graded SAND with Silt, ~5-10% Silt, ~90-95% predominantly fine sand, with ~3-5% medium grained (maximum 2 mm diameter), occasional fine gravel (maximum 6 mm diameter), olive brown (2.5Y 5/4), moist. 90 Bottom of boring at 86'. 95 100-DESCRIPTION OF BORING LOCATION: On west side of Pioneer Blvd., in green belt in front of 9929

DESCRIPTION OF BORING LOCATION: On west side of Pioneer Blvd., in green belt in front of 9929 Pioneer Blvd., ~4 feet from curb.

SAMPLE IDENTIFICATION LOG

SAMPLE I	DENTIFICA	ATION LOC	;					-
		Operable	Well	Sampled Medium	Sample Type ¹	Sequential]
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1		rip Blank;		MS/MSD;		tory Split.		
5/01/06		OC2	PMW21	<u> </u>	4	01	Trip 1x40ml (106)	065374
	07:40	OC2	PMWZI	W	1	02	Field Blank Sx 40ml	056310-39, -38
	03:45	0(3	EWINSI	W	0	03	PMWZIQ69' 3x40ml-cha	056335, -34, -37
<u> </u>	08:35	oca	PALUEL	W	3	04	Equip Blank 3x40ml-cla	DZ8 320' -321' 275
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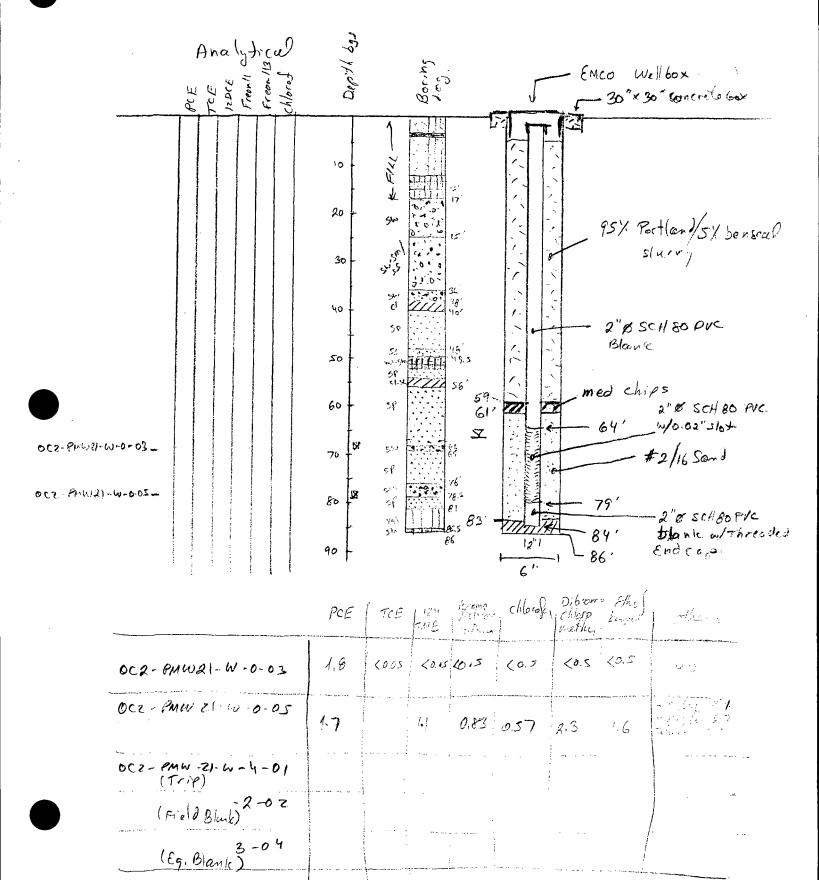
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(Page 1 of 4)

Date Completed : April 27, 2006 OVA : MiniRae Logged By : Ronald Halpern Driller Omega Chemical Operable Unit 2 Project No. CA000646.0001 Checked By : Ronald Halpern **Drilling Method** : Sonic **Drilling Company** : WDC Diameter : 6" : Sonic SpeedStar 15K Drill Rig Calibration Gas/Conc : 100 ppm isobutylene Well: MW-22 **SRAPHIC** Samples Elev.: 151.36 Depth OVA Time DESCRIPTION Feet Lab No. Cover n Sod to ~6" Surface SILTY SAND, ~20-30% Silt, ~70-80% fine Casing sand, soft, brown to reddish brown, wet, rootlets (Fili). 4/24/06 SM Post hole to 5 ft. 5 4/25/06 9:40 SILTY SAND with CLAY, CLAYEY SAND with SILT, ~60-80% fine Sand, ~20-40% silt and clay, medium stiff, dark brown (10YR 8/2), moist. SM-SC 9:55 Same as above. 10 (10-10.67') Poorly graded SAND, fine-grained SP 95% Portland (max. 0.5 mm diameter), dark yellowish Cement/5% Benseal brown (10YR 4/6), slightly moist. ML (10.67-12.5') Non plastic SILT, medium stiff, 2" Dia Sch 80 PVC Blank friable, ollive brown (2.5Y 4/4), moist. (12.5-14') Poorly graded SAND, fine-grained, SP yellowish brown (10YR 5/4), moist. (14-14.67') SILT, stiff to hard, olive brown ML (2.5Y 4/4), slightly moist, low to medium 15 10:10 SP-SM toughness, low to medium plasticity, low dry ML strength. (14.67-15') Poorly graded SILTY SAND, SAND with SILT, ~10-20% silt, 80-90% fine SP sand, (max. 0.5 mm diameter), olive brown (2.5Y 4/3), slightly moist. (15-15.3') SILT with CLAY, hard, slightly moist, brown (10YR 4/3), mottled with oxidation stains, low toughness, medium 20 SM plasticity, low dry strength, and yellowish brown, horizontal lamina. (15.3-16.3') Poorly graded SAND, fine to 11:00 medium grained, (max 1 mm diameter), light plive brown (2.5Y 5/4), slightly moist. (16.3-16.7') Poorly graded SILTY SAND, -20-30% silt, 80-90% fine to low end medium SP sand (max 1 mm diameter) hard, friable, (semiconsilidated) brown (10YR 4/3), slightly 25 moist, mottled with oxidation stains

DESCRIPTION OF BORING LOCATION: On east side of Arlee, just north of Terradell, ~3 1/2 ft. in from curb.



(Page 2 of 4)

OVA **Date Completed** : April 27, 2006 : MiniRae : Ronald Halpern Driller Logged By Omega Chemical Operable Unit 2 Project No. CA000646,0001 **Drilling Method** Checked By : Ronald Halpern : Sonic **Drilling Company** : WDC Diameter : 6" Drill Rig : Sonic SpeedStar 15K Calibration Gas/Conc : 100 ppm isobutylene Well: MW-22 **SRAPHIC** Recovery % Elev.: 151.36 Depth OVA Time DESCRIPTION in Feet Lab No. 25 (23-26') Poorly graded SAND, fine (max 0.3 SP mm diameter), light olive brown (2.5Y 5/3), SP-ML slightly moist, trace fine and coarse gravel size rounded, nodules consolidated sand. (26-26.5') Poorly graded SAND/SILT; very SP-SM fine sand bordering silt, olive brown, hard, slightly moist, consolidated. (26.5-29') Well graded SAND with GRAVEL, 11:00 SM-SS -3-5% silt, ~25% fine and coarse gravel 30 (sedimentary) ~70% well-graded fine to coarse sand (max 5 mm diameter), light olive gray (5Y 6/2), slightly moist. SW (29-30') Poorly graded SILTY SAND, ~20-30% silt, ~10-15% med-coarse sand, ~55-70% fine sand consolidated, hard, dark grayish brown (2.5Y 4/2), moist, trace fine SW-SM gravel (3-5%). (30-33') Well graded SAND with GRAVEL, 35 ~60-70% fine to coarse sand (max 5 mm 95% Portland diameter), subangular, ~30-40% fine and Cement/5% Benseal coarse subrounded to subangular gravel SP Slurry (max 60 mm diameter), light yellowish brown (2.5Y 6/3), slightly moist, gravel igneous to 2" Dia Sch 80 **PVC Blank** (33-34') Well graded SAND with SILT and 11:55 GRAVÉL, ~5-10% sllt, ~60% fine to coarse sand (max 5 mm diameter), ~30% fine and coarse subangular to angular gravel (max 30 40 mm diameter), light brownish gray (2.5Y 6/2), slightly moist, gravel is consolidated sedimentary (Sand and Silty Sand). SW-SM (34-38.5') Poorly graded SAND, predominantly fine to medium (max 2 mm diameter) sand, ~5-10% coarse sand, 3-5% fine subrounded gravel, light olive brown, slightly moist. (38.5-43') Well graded SAND with GRAVEL, 45 fragmented sand stone, ~5-10% silt, ~50% SP fine to coarse sand (max 5 mm diameter), -40% fine gravel size subangular to angular 13:10 rock chips (sedimentary). (43-47.5') Poorly graded SAND, ~5-10% subrounded fine and coarse gravel (igneous and metamorphic), ~90-95% fine to medium SW sand, slightly moist, increasing grain size to coarse like gravel.

DESCRIPTION OF BORING LOCATION: On east side of Arlee, just north of Terradell, ~3 1/2 ft. in from curb.

1 1			ARCA			lities			LOG OF BORING	G MW		an 3 of 4\
		mega	a Chemical (ject No. CA0	Operable	e Unit 2		Logg Che Drilli	Date Completed : April 27, 2006 OVA Logged By : Ronald Halpern Driller Checked By : Ronald Halpern Drilling Method				ge 3 of 4) MiniRae Sonic 6" 100 ppm isobutylene
Dep in Fee	et	Samples	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well: MV Elev.: 15	
5	0	\bigvee		13:10			sw		(47.5-53.5') Well graded SAND with GR ~20-30% subangular to subrounded ign gravel (max 40 mm diameter), ~70-80% to coarse sand (max 5 mm diameter), illy yellowish brown (2.5Y 6/4), slightly mois Same as above, light gray (2.5Y 7/2), G fine to coarse (max 20 mm diameter).	neous % fine ight st.		
5	5 - 1 - 1 - 1	\bigvee		15:05			ML		(54.5-55.5') Non plastic SILT with SANE SANDY SILT, ~25-35% med-coarse sal (max 5 mm diameter), ~65-75% silt, har yellowish brown (10YR 5/4), moist, consolidated, trace fine angular gravel. (56-57') Poorty graded SAND, predomin fine to medium grained, hard, (consolidated, trace)	and ard, nantly		—95% Portland Cement/5% Bensea Sturry
6	0-					SP-	SM/SW ML	SM	pale olive (5Y 6/3), moist. (57-60) Poorly to well graded SAND with SILT, ~5-10% silt, 50-60% fine sand, ~30-40% coarse sand (max 5 mm diampale olive (5Y 6/3), slightly moist. (60-61') SILT with SAND, ~15-20% med coarse sand (max 5 mm diameter), trace gravel (max 8 mm diameter), ~80-85% significant sand (max 8 mm diameter), ~80-85% significant sand (max 8 mm diameter), ~80-85% significant sand sand sand sand sand sand sand sand	dium to		─2" Dia Sch 80 PVC Blank
6	5-1						SW-SM		borderline v. fine sand, light olive brown (2.5Y 5/4), dry, occasional coarse grave 30 mm diameter). (61-63') Well graded SAND with SILT, ~5-10% fine subrounded igneous gravel 8 mm diameter), ~10-20% silt, ~70-85% to coarse sand; light yellowish brown (2.5).	el (to el (max 6 fine	•	PVC BIATIK
NIMTech5/Omega Chemical/MW-22.BOR	0		OC2-PMW22 W-0-04 OC2-PMW22 W-1-05	10:42			SP		6/3), dry, increasing gravel to ~15% by feet, gets moist to wet by 64 feet, consolidated. Poorly graded SILTY SAND, ~20% silt, fine sand, hard (fragmented), brown, we 66 feet. (66-76') Poorly graded SAND, fine to me (max 1 mm diameter), dark olive brown 3/3), wet, occasional coarse gravel (subrounded gneiss and/or igneous max mm), micaceous sand with biotite and minerals.	80% et at edium (2.5Y		─Medium Chips —#2/16 Sand Pack

-2" Dia. PVC Sch 80 (0.020" Slotted Screen)

DESCRIPTION OF BORING LOCATION: On east side of Arlee, just north of Terradell, \sim 3 1/2 ft. in from curb.



Infrastructure, environment, facilities (Page 4 of 4) OVA **Date Completed** : April 27, 2006 : MiniRae Driller Logged By : Ronald Halpern Omega Chemical Operable Unit 2 Project No. CA000646.0001 Checked By : Ronald Halpern **Drilling Method** : Sonic **Drilling Company** : WDC Diameter : 6" Calibration Gas/Conc : 100 ppm isobutylene Drill Rig : Sonic SpeedStar 15K Well: MW-22 **SRAPHIC** Recovery % Elev.: 151.36 Samples Depth OVA Time DESCRIPTION in Feet Lab No. 75 (76-88') Same as above - increasing grain size - predominantly, fine to medium (0.1 to 2 13:40 mm), occasional coarse sand (up to 4 mm OC2-PMW22 diameter), occasional coarse subrounded w-0-06 igneous Gravel (max 30 mm diameter). 80-SP 2" Dia. PVC Sch 80 (0.020" Slotted Screen) #2/16 Sand Pack 85 15:00 OC2-PMW22 16:40 W-0-07 ML (88-88.5') Non plastic SILT, stiff, light olive 4/27/06 brown, moist. (88.5-91') Poorly graded SAND, fine to medium (max 2 mm diameter). SP 90 (91-92') SILT borderline SILTY SAND v. fine ML-SM 2" Dia Sch 80 Sand <0.1 mm with ~5-10% ~0.1-0.2 mm 9:00 **PVC Blank** diameter sand, hard, olive brown, moist to wet, laminar black (organic?) layers, COMMON/MTech5\Omega Chemical\MW-22.BOR SP horizontal separation. (92-94') Poorly graded SAND, fine to medium grained (max 2 mm diameter). Threaded End Cap 95 ML Medium Chips (94-96') Non plastic SILT, ~3-5% fine sand, ~95-97% silt, medium stiff, friable, olive brown (2.5Y 4/3), moist, horizontal laminations. Bottom of boring at 96'. 100

DESCRIPTION OF BORING LOCATION: On east side of Arlee, just north of Terradell, ~3 1/2 ft. in from curb.

TAT

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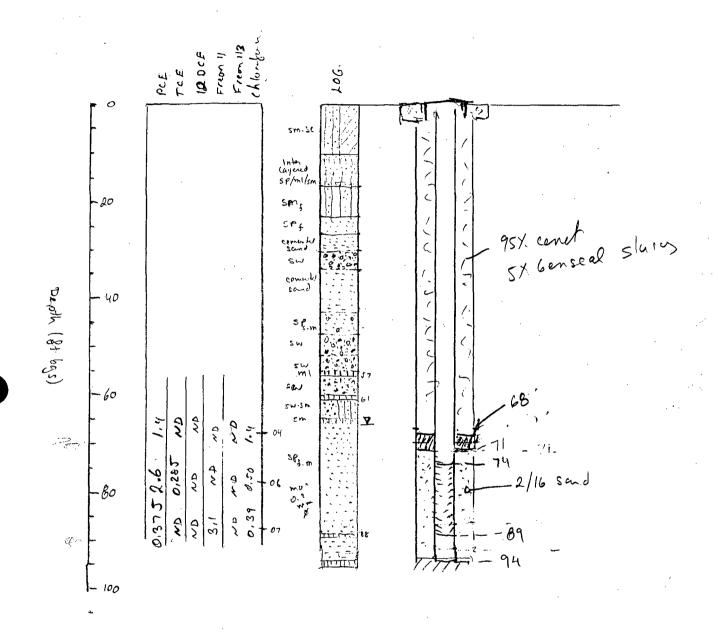
SAMPLE IDENTIFICATION LOG

SAMPLE I	DENTIFICA	ATION LOG	;				i	_
		Operable	Well	Sampled Medium	Sample Type ¹	Sequential		contains#
Date	Time	Unit	Location	(W ater or S oil)	(0 thru 6)	Sample No.	Remarks	
Sample Ty				Duplicate; 2 - F MS/MSD;	ield Blank; 6 - Regula		uipment Blank	
4/25/06	13100	rip Blank;	8MW22			1	le: 0 1 6 4 (056326,-23,-24
4/25/00	13.00		PMWZZ	<u> </u>	4	01	Equip Blank-Simulprole	065426
	10105	002		ω		02	Trie	056319,-20,-21
4/25/06	-	00 Z.	PMWZZ	W	2	0.3	Field blank PMW22@68' 3x40 clv	056318.056317
1/26/06	10:42	002	PMWIZ	ω	0	04	PMINIZZE GO 3X40 CIV	056329
4/26/06 4/16/06	10,43	002	PMW22	w	0	5 5	Dup MW12@70'3x40 dr	056297
	13:40	002		<u> </u>		06	IMW CLE 18	056326 -27, -28
4/16/06	16:40		PMWZZ		<u>0</u>	07	PMW 32 688	056315:16+
4/26/00	16:45	002	8MW 22			90	20,6 xxx 419	
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4/25/04	10,20	•	ļ				161N41CT-SI 1X802	Glass
1.1.1	12:25						151N41CT-52 1x802	6/000
4/26/06							1012 41 CT-S3 1x809	Glass @ 70°
	17:00						BIN41CT-SI 1X802 BIN41CT-S2 1X802 BIN41CT-S3 1X802 BIN41CT-S4 1X802	Oloss @ 881
 						%	· · · · · · · · · · · · · · · · · · ·	1
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SUBJECT: Proposed Well (onstruction PMW22

CHKD: DATE:



Methyler Chloride 0,245 -01 - 02

Chloroforn 1.4 PCE 1.4 Northalm 10 124 Trimothyl Largue 0,25 124 Trimothyl kerne 0,245 Chlorofor 1.4 reportede 12 PCE 1.3 Chloro 0,50 reporthele 7.0 PCE 2.6 TCE 0,285. -05 -06

Frem 11 3.1 EB 0,35 X 1.485 Nephthelm 0.77 PCE 0,375 TCE KO.S -07 Toluene 0,495 Bromodichloonether 1,3, Bromoform Z.5 chloroform 0,39

ARCADIS G&M

Well Construction Log

↑ft LAND SURFACE	roun/city Santa Fe Springs
	Town/city Santa Fe Springs
6 Inch dlameter	county Los Angles State CA
drilled note	Permit No.
Outer well casing,	Land-Surface Elevation and Datum:
NA inch diameter,	feet Surveyed
	Estimated
Backfill	, -
Grout 95% sontand 5% benseal	Installation Date(s) 4/24 - 4/27/06
68 ft. SV. Senzent	Drilling Method Soni's
	Drilling Contractor WBC
inner Well casing	Drilling Fluid
2 inch diameter,	
68 ft*	Development Technique(s) and Date(s)
	bevelopment recliniquess and batess
Slurry Slurry	<u> </u>
Bentonite 71 ft* Detects	
to hips	
	Fluid Loss During Drilling gallons
	Water Removed During Developmentgallons
Well Screen.	Static Depth to Water feet below M.P.
inch dlameter	Pumping Depth to Waterfeet below M.P.
<u>(O, O2</u> slot	Pumping Durationhours
	Yieldgpm Date
Gravel Pack	Specific CapacitygpmVft
Sand Pack # 2/16	
Formation Collaspse	Well Purpose Monitoring Grounders to Doclot
કું _€ .	
94 ft*	Remarks
Measuring Point is Top of Well Casing	
Unless Otherwise Noted.	

* Depth Below Land Surface g:\common\FORMS\WELLINTM 5/15/2005

ARCADIS LOG OF BORING MW23 (Page 1 of 8) Date Completed OVA : MiniRae Omega Chemical Operable Unit 2 : May 20, 2005 Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller : Mark Green Checked By : Core/Simulprobe : Ronald Halpern, PG Sampling Method **Drilling Company** Diameter : 9 3/4 inches Drill Rig : Faline Star SOK-CH ARCH/Mud Calibration Gas/Conc : 100 ppm isobutylene Well1: MW23B Well2: MW23C Well3: MW23D Blow Count GRAPHIC Recovery % Elev.: 149.35 Depth Time OVA **DESCRIPTION** in Feet Lab No. Cover 0 Sod Surface Casing Concrete 5/16/05 @ 16:00 5 10 95% Portland Cement 5% Volclay ML 2" Dia. (Off cyclone cuttings). SILT with Clay; olive brown, wet, very soft, no odor. 16:05 0.2 Sch. 80 PVC 15 2" Dia. Sch. 80 PVC 20 16:10 (Off cyclone). Same as above.

In greenbelt on the northeast side of Burke Street, just northwest of Beasor Road (near PPO34). Elevation noted is finished surface grade. B = Intermediate; C = Lower Intermediate; D = Deep



(Page 2 of 8)

OVA : MiniRae Omega Chemical Operable Unit 2 **Date Completed** : May 20, 2005 Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller : Mark Green Checked By : Ronald Halpern, PG : Core/Simulprobe Sampling Method **Drilling Company** Diameter : 9 3/4 inches Drill Rig : Faline Star SOK-CH ARCH/Mud Calibration Gas/Conc : 100 ppm isobutylene Well1: MW23B Well2: MW23C Well3: MW23D Blow Count Recovery % Elev.: 149.35 Samples Depth OVA Time DESCRIPTION in Feet Lab No. 25 (Off cyclone). SILTY CLAY, brown (10YR 4/3), moist, soft, no odor; medium tough, moderate plasticity, no dilatency. 95% Portland Cement CL 5% Volclay 30-16:30 0.3 (Off cyclone). Same as above, dark brown to brown. 16:33 0.2 (Off cyclone). SAND with Silt; approx. 5-10% brown silt; 90-95% fine-grained sand; dark brown (10YR 3/3), moist, no 35 SP-SM odor. Groundwater apprx. 37 feet bgs based on water staining on drill rods. 2" Dia. Sch. 80 PVC (38-40' Off cyclone). Well graded SAND, apprx. 2-5% silt; 95-98% fine to coarse 40 SW 2" Dia. sand (max diam. 5 mm), occassional fine Sch. 80 PVC gravel (max. diam. 20 mm); brown (10YR OC2-PMW23 16:40 4/4), wet, no odor. W-0-03 Well graded GRAVEL with Sand; apprx. 30% fine to coarse sand, 70% fine and OMMONIMTech5\Omega Chemical\MW-23.BOR coarse gravel (max. diam. 30 mm), subrounded igneous (granitic) gravel. Bentonite Sand Mix GW 45 5/17/05 7:30 SP 7:40 50

In greenbelt on the northeast side of Burke Street, just northwest of Beasor Road (near PPO34). Elevation noted is finished surface grade. B = Intermediate; C = Lower Intermediate; D = Deep



(Page 3 of 8)

Omega Chemical Operable Unit 2 **Date Completed** : May 20, 2005 OVA : MiniRae Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller : Mark Green Checked By : Ronald Halpern, PG Sampling Method : Core/Simulprobe **Drilling Company** : WDC Diameter : 9 3/4 inches Drill Rig : Faline Star SOK-CH ARCH/Mud Calibration Gas/Conc : 100 ppm isobutylene Well1: MW23B Well2: MW23C Well3: MW23D Blow Count **3RAPHIC** Recovery % Elev.: 149.35 Depth OVA Time **USCS** DESCRIPTION in Feet Lab No. 50 (~50' Off cyclone). Poorly graded SAND, ~95-98% fine to medium grained (max. OC2-PMW23 13:20 2.0 W-0-05 diam. 1 mm), brown, saturated, trace silt, occasional fine and coarse gravel (max. 35 mm diam). (From Simulprobe): Poorly graded SAND with Gravel; ~30% fine to coarse gravel, ~70% fine to medium sand (max. diam. 1.5 mm), brown (10YR 4/3) wet to SP 55 saturated, no odor, Gravel is subangular to subrounded igneous with max. diam. of 25 mm 60 (Off split-spoon), Well graded SAND, 1:1 Bentonite ~5% silt, 95% fine to coarse sand (max. Sand Mix OC2-PMW23 W-0-07 13:40 2.2 diam. 5 mm), trace fine gravel (max diam. SW 7 mm), dark grayish brown (10YR 4/2), 16:20 saturated, no odor. 2" Dia. Sch. 80 PVC Well graded GRAVEL with Sand; 60-80% fine and coarse gravel. GW 65 2" Dia. Well graded SAND, fine to coarse, Sch. 80 PVC brown, saturated. Alternating layers of SP, SW and GW as SW described above, max. diam. 35-40 mm, subangular to subrounded igneous and OMMON\MTech5\Omega Chemica\\MW-23.BOR metamorphic (gneiss) gravel. Poorly graded SAND, ~3-5% silt, 95-97% fine to medium sand (max diam 2 mm), brown to dark grayish brown (10YR 17:41 1.9 No Water 4/3-4/4), wet, no odor. Recover SP

In greenbelt on the northeast side of Burke Street, just northwest of Beasor Road (near PPO34). Elevation noted is finished surface grade. B = Intermediate; C = Lower Intermediate; D = Deep

2000 20 00



Ì	Infr	astruo	ctur	e, environn	nent, fa	cilitie	s					(Pag	je 4 o	f 8)		
	(emical Oper No. CA0006				Logged Checke	d By Company	: May 20, 2005 OVA : MiniRae : Ronald Halpern, PG Driller : Mark Green : Ronald Halpern, PG Sampling Method : Core/Simulpro : WDC Diameter : 9 3/4 inches : Faline Star SOK-CH ARCH/Mud Calibration Gas/Conc : 100 ppm isobo						
	Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION	RIPTION		/23B /23C /23D 35			
ſ	75-				5/18/05 7:50			T				周图	ज्ञात-	1:1 Bentonite		
	- - - - -	_			7:55	1.5	<u> </u>	SP-SM		(Off cyclone). Poorly graded SAN Silt; ~5-10% brown silt, 90-95% predominately fine to medium sar diam 1 mm), very dark grayish bro (2.5Y 3/2), saturated, no odor.	nd (max	AKAKAKAKA KAKAKAKAKA		Sand Mix		
	80		90	OC2-PMW23 W-0-013		1.3				Driller noted changes in drilling co at 79' bgs. SILT, very dense, olive (5Y 4/3), v odor, rapid dilatency, low toughne moderate plasticity.	vet, no			−Medium Chips −2" Dia. Sch. 80 PVC		
	85							ML						−#30 Transition Sand		
I				İ			İ			Driller felt change in drilling condit				−2" Dia. Sch. 80		
	90-	\mathbb{X}		OC2-PMW23 W-0-16				SP-SM		(88-90' Off cyclone). Poorly grade SAND, Sand with Silt; ~3-10% silt fine to fine sand (max 0.2 mm), spown and black, saturated, no or micaceous.	, very beckled			PVC -#2/16 Sand -2" Dia. Sch. 80 PVC		
DICAMMAN-23.DOR	95				14:28	1.1		SP		(Split-spoon). Poorty graded SANI grained (max 0.5 mm), very dense brown (2.5 YR 4/3), saturated, micaceous, mafic gravels.				-2" Dia. PVC Sch 80 (0.020" Slotted Screen)		
COMMON/M ecns/Omega Chemical/MW-23.BOR	1.1.1.1.1				14:48			GP		(Off cyclone). Poorly graded GRA with Sand, ~80% fine gravel (max mm), ~20% coarse sand, saturate subrounded, igneous. (Off cyclone). SILT, brown, satura	: 18 ed,/					
COMMONIMI	100-							ML						2" Dia. Sch. PVC Blank		

In greenbelt on the northeast side of Burke Street, just northwest of Beasor Road (near PPO34). Elevation noted is finished surface grade. B = Intermediate; C = Lower Intermediate; D = Deep



(Page 5 of 8)

Omega Chemical Operable Unit 2 **Date Completed** : May 20, 2005 OVA : MiniRae Project No. CA000646.0001 Logged By : Ronald Halpem, PG Driller : Mark Green Checked By : Ronald Halpern, PG Sampling Method : Core/Simulprobe : WDC **Drilling Company** Diameter : 9 3/4 inches Drill Rig : Faline Star SOK-CH ARCH/Mud Calibration Gas/Conc : 100 ppm isobutylene Well1: MW23B Well2: MW23C Well3: MW23D —#2/16 Sand Blow Count GRAPHIC Recovery % Elev.: 149.35 Depth Samples Time OVA DESCRIPTION in Feet Lab No. 100 3/4" Bentonite (101-102' from split spoon). SILT, very stiff (<1/4" penetration); olive brown (2.5 Chips 2" Dia. 15:38 0.3 No Water YR 4/3), moist, no odor, rapid dilatency, Sch. PVC moderate toughness, low plasticity, low liquid limit, low dry strength. Blank 105-ML 110 SILTY CLAY, stiff to very stiff (~1/4" 1:1 Bentonite Sand Mix penetration), olive brown (2.5 YR 4/3), 16:15 0.1 No moist, occasional gray (organic) Water staining/marine-trace shell molds, Sample moderate tough, high plasticity, no 2" Dia. Sch. 80 PVC dilatency. 115-2" Dia. Sch. 80 PVC CL OMMON\MTech5\Omega Chemical\MW-23.BOR 120 SILTY CLAY - Same as Above. 17:00 0.3 No Water **Sample** 125

In greenbelt on the northeast side of Burke Street, just northwest of Beasor Road (near PPO34). Elevation noted is finished surface grade. B = Intermediate; C = Lower Intermediate; D = Deep



(Page 6 of 8)

OVA : MiniRae Omega Chemical Operable Unit 2 **Date Completed** : May 20, 2005 Project No. CA000646.0001 Logged By : Ronald Halpern, PG Driller : Mark Green Checked By : Core/Simulprobe : Ronald Halpern, PG Sampling Method **Drilling Company** : 9 3/4 inches Diameter Drill Rig : Faline Star SOK-CH ARCH/Mud Calibration Gas/Conc : 100 ppm isobutylene Well1: MW23B Well2: MW23C Well3: MW23D **Blow Count** GRAPHIC Recovery % Samples Elev.: 149.35 Depth OVA Time in DESCRIPTION Feet Lab No. 125 CL 1:1 Bentonite Set Simulprobe 130-132 on 5/18/05. End Sand Mix drilling 5/18/05. 130-OC2-PMW23 W-0-21 5/19/05 0.8 SILT with Clay, stiff, brittle, olive (5Y 4/4), 7:20 ML. moist, no odor. (Off cyclone). Poorly graded SAND, predominantly medium grained (80%) with fine (3-5%) and coarse (~15%) sand and trace silt, olive brown, 2" Dia. Sch. 80 PVC 135 saturated, no odor. SP 2" Dia. Sch. 80 PVC (139' Off cyclone). Poorly graded SAND, same as above. 140 Medium Chips (141-142' Off split spoon). SAND, Well Graded, ~40% fine to medium-grained, OC2-PMW23 11:49 1.0 SW Sand #30 W-0-27 ~60% coarse sand (max 5 mm) to fine gravel (12 mm), olive brown (2.5Y 4/3), saturated. OMMONIMTech5/Omega Chemical/IMW-23.BOR (Off split spoon). Poorly graded SAND, Sand fine to medium-grained (max 1 mm #2/16 diameter), olive brown. 145 SP 2" Día. PVC Sch 80 (0.020)Slotted Screen)

In greenbelt on the northeast side of Burke Street, just northwest of Beasor Road (near PPO34). Elevation noted is finished surface grade. B = Intermediate; C = Lower Intermediate; D = Deep

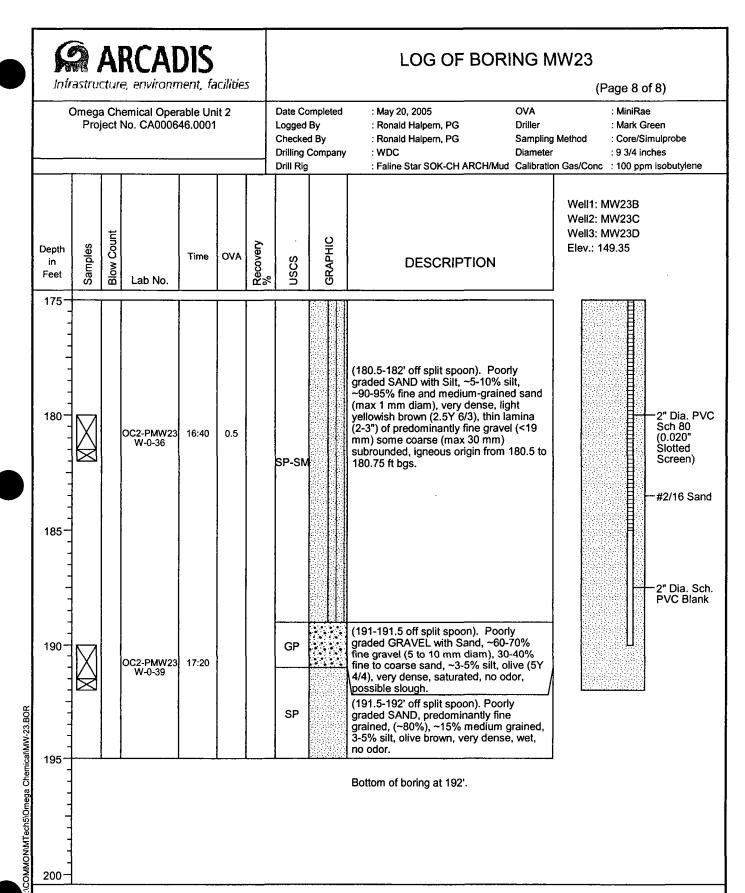
2000 20 00



					cilities		-			(Page 7 of 8)				
			emical Oper No. CA0006				Logged Checked	d By Company	: May 20, 2005 : Ronald Halpern, PG : Ronald Halpern, PG : WDC : Faline Star SOK-CH ARCH/Mud	OVA Driller Sampling Method Diameter Calibration Gas/Conc		MiniRae Mark Green Core/Simulprobe 9 3/4 inches 100 ppm isobutylene		
Depth in Feet	Samples	Blow Count	Lab No.	Time	OVA	Recovery %	nscs	GRAPHIC	DESCRIPTION		Well1: M\ Well2: M\ Well3: M\ Elev.: 149	W23C W23D		
150-	M		OC2-PMW23 W-0-29	12:52	0.7				(151-152' off split spoon). Poorly of SAND with Silt, fine to medium gr Stopped drilling 5/20/05 152'. Red drilling 5/23/05 at 7:30 a.m.	ained.				
155-							SP-SM					-#2/16 Sand -#2/16 Sand -2" Dia. PVC Sch 80 (0.020" Slotted Screen)		
160 			OC2-PMW23 W-0-32	5/20/05 8:45	0.4		GW	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(160.5-161' from split spoon). We graded GRAVEL, fine to coarse g (max 30 mm), subrounded, suban ligneous. (161-162' off split spoon). SILT, s	ravel ngular, stiff,		2" Dia. Sch. PVC Blank		
165-					0.7		ML-CL		olive brown (2.5Y 4/3 to 4/4), moist toughness, rapid dilatency, low plate (166-167' off split spoon). CLAYE SILTY CLAY, hard, light olive brown y 5/4), moist, no odor, brittle, low moderate plasticity, low to moderate toughness, slow to moderate dilate.	EY SILT, wn (2.5 to		80 PVC		
170-			OC2-PMW23 W-0-34	13:40	0.6		GP		Poorly Graded GRAVEL, predomi fine, (4-10 mm diam), subangular subrounded, igneous origin (quart orthoclase, mafic), saturated (possluff).	natly to z,		Sand Mix		
-							ML-CL		(171.5-172' off split spoon). CLAY SILT, SILTY CLAY, hard (<1/8" indentation), olive (5Y 4/4), moist no odor; Thin lamina (1-2 cm) gravelay, with fine to coarse gravel.	to wet,		Sand #30		

In greenbelt on the northeast side of Burke Street, just northwest of Beasor Road (near PPO34). Elevation noted is finished surface grade. B = Intermediate; C = Lower Intermediate; D = Deep

2000 10 00



In greenbelt on the northeast side of Burke Street, just northwest of Beasor Road (near PPO34). Elevation noted is finished surface grade. B = Intermediate; C = Lower Intermediate; D = Deep

SAMPL	LE IDE	NTIFIC	AHON	LOG

	Operable Unit	Well Location	Sampled Medium (W ater or S oil)	Type ¹	Sequential Sample No.	Remarks (1998)	Time
Dale	Sample Typ		Sample; 1 - Field				
	OC2	4 - Trip Bla P M从23	nk; 5 - MS/ ₩	3	6 - Regulator		13: 25
5/16	002	PMW13	W	ŭ	02	Rinse blank from Simulprobe Lib-supplied Trip blank	13/30
5/16	002	PMW13	W	Ø	03	PMU1230,42'	18:21
5/16	oc 2	PHINE'S	2	Ø	103a	Soil from Simul probe \$1.5-92"	
<i>5/1</i> 7	DC2	PMW13	W	Ч	04	Trip Blank	07/3
′′	0C Z	PMW23	W	Ø	05	PMW23@521 24 VOA, V	1320
	00.2	PMW23	S.	0	06	3 Soil land Similarobe	1
	0(2	PAUL 22	(a)	Ø	07	PMW 23@ 62'	-1620
	062	Pmw23	1//	2	08	Fuld Blank	1625
	002	PMUZ3	3	'Ø	09	For Sieve only- no hydro]
	0.7	PAWZZ	S	Ð	10	PMW23 @ 171,5-72'	17:40
5/18	oci	PAWZ	W	2	11	Early Blank 7: LO am	7:20
١.	002	PMW23	IN.	Ч	12	Trip Blank	7,40
	062	PMW L3	W	Ø	13	PMW230 82'	13: 0
	OC2	PMW72	41		14	Duplicate.	13:0
	oc z	PMWES	S	0	is	Sn:1 Scaple 81,5-82'	13:05
	002	PMW23	W	Ø	16	water sande to 82"	14.5
	OC2	PMW23	,S1	0	1.7'	Soil Suple @92"	
	DC 2-	PMINZ 3	S	<i>Q</i>	8 (Soil sarple @ 101:5-102'	15:38
	0007	PHW23	S	Ø	19	Soil sayshe 110-1111	16:15
-T	003	PMW 23	<u>.</u> S	<u>a</u>	20	501/ supli_ @ 120-121	17:00
119	00.7	PMW23	iv.	0	21	wate sangle @ 132'	07.20
	oci	PMW23	22	8	22	So. 1 Supl. 131-131.5	
	al	PMWEZ	w	Ч	25	INP Blank	27:40
	(OCZ	PM60 205 B			-01		
	1002	PHINES-BM 1	- 5		-O 7.		
	000	PAWARDA	<u>- S</u>		.03		
		PMDI (3-18-0)	_ <u>`</u>		-04		
7	<u> </u>	POW 23 Bind			-03		
20	062	PMW13	W	4	24	Trie	8:00
1	002	PHW 23	<u> </u>	2	25	reld Blank	11:32
}	OC 2	PMW23	(U)	2	26	Soil @ 192'	11,32
ŀ	002	PMW13	Same	<u> </u>	87		11:47
ı	00.2	PMW23	W	3	28	Sail @ 141 - 1415 Egup Duk	
ŀ	0(2	PMW13	<u>~</u>	8	29	waln @ 152 (1x40 m/ 10A)	12,54
	e C c	PMW23	WES .	- B	30	Soil ~ 151-152,5	15:09

Notes

To Equip Blank erry My Field Blank - Overy day

o Trip Blank erry coole

a Daplicate every 10 cake sample-



	١.			PAGE
SUBJECT:		BY: DATE:		
		CHKD: DATE:	(5	SHEET
JOB NO:				

Orevable unit	wellLoc	Medium (W on S)	Simple Type (0 thro 6)	Sundle No	Remarks/Dala
saple Type:	0-Primary Sm	ok 1-fixed on £ 5-Ms/M.	phicate 2-field	blank 3-Eg	vipment Black
5/23/00 2 00 7 00 2 00 2 00 2 00 2 00 2	PMW23 PMW23 PMW23 PMW23 PMW23 PMW23 PMW23		4	31 32 34 35 36 384	5/23/05 2 08:45 - 3x40ml 2 162' 6x40 ml @ 172'@ 13:40 50:1 wate @ 182 @ 16:40 0 Field dup @ 182'16:45 Trip (1 voa)
s/vilos ocz	PMW 23	W	Li	39	Tol
N, ,	pmw es	W	ð.	чo	water € 192'
		ļ			
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PACIFIC SURVEYS

Witnessed By

INDUCTION LOG GAMMA-RAY

				GAMM	A-RA	Y			
Job No.									
12142	Company	WDC	WDC EXPLORATION & WELLS						
	Well	PIMVV	PMW-23						
File No.	Field	SANT	A FE SPR	INGS					
	County	LOS	ANGELES	State	CA				
Location:					Other Sen	vices:			
OMEGA CHEM	IICAL: BEASOR @	BERK			NONE				
Sec.	Twp.		Rge.						
Permanent Date	ım G.I	L.		Elevation		Elevation			
Log Measured I			0	above perm. da	atum	K.B. D.F. G.L.			
Drilling Measure	ed From G.I					Ğ.L.			
Date		07-28	-05						
Run Number		ONE							
Depth Driller		190'							
Depth Logger		189' 0	SR	150' Induction					
Bottom Logged		188'	· · · · · · · · · · · · · · · · · · ·	150'					
Top Log Interva	<u></u>	0,							
Casing Driller		2" PV	<u> </u>						
Casing Logger		189'				· · · · · · · · · · · · · · · · · · ·			
Bit Size		N/A							
Type Fluid in He		Water	,						
Density / Viscos	ity	N/A							
pH / Fluid Loss		N/A							
Source of Samp		N/A							
Rm @ Meas. T		N/A N/A							
Rmf @ Meas. T Rmc @ Meas. 1		N/A				 			
Source of Rmf		N/A		-					
Rm @ BHT	rinc	N/A			-	 			
Time Circulation Stopped		1.4/		+					
Time Logger on Bottom				-					
Max. Recorded		16:30 N/A							
Equipment Num		PS-3		 					
Location		L.A.		 					
Recorded By	···	RIDDE	R	1					

T. Goo

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

<<< Fold Here >>>

Comments

Gamma Ray Calibration Report

Serial Number: Tool Model: Performed:

Comprobe GROH Tue Jan 09 08:54:56 2001

Calibrator Value: 162.0 **GAPI** Background Reading: 17.5 cps cps Calibrator Reading: 93.7 2.1280 GAPI/cps Sensitivity:

12142.db Database File:

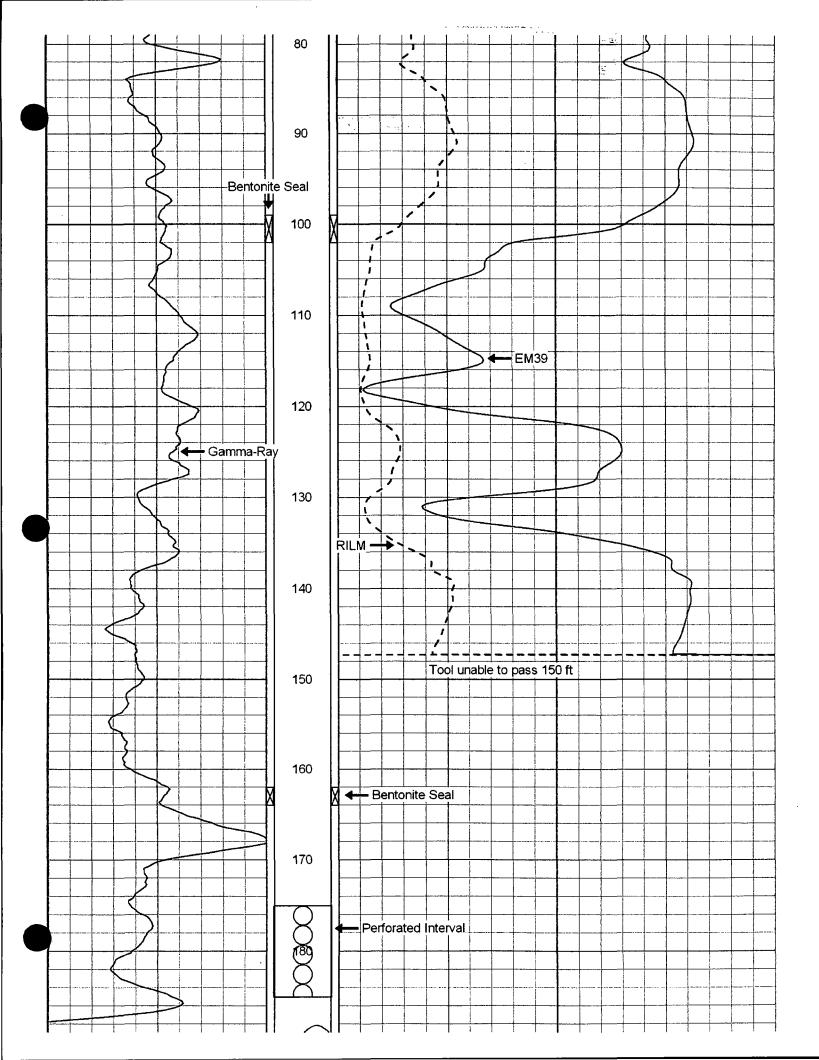
Dataset Pathname: WDC/well/run1/DIL

Presentation Format:

dil-gr Thu Jul 28 15:42:40 2005 by Log Warrior 7.0 STD Ope Depth in Feet scaled 1:120 Dataset Creation:

Charted by:

0	Gamma-Ray (GAPI)	80	200 EM39 (mmho-m)					
	Line Speed (ft/min)	50	0 RILM (Ohm-m) 10					
			100 RILM back-up (Ohm-m) 20					
			400 EM39 back-up (mmho-m) 20					
_								
		10						
	+++++>							
	+++++	20						
		\Rightarrow II						
1								
_		30						
\vdash								
-								
		40						
-								
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	+							
	++>++++							
		60						
-								
+-		 7 0						
	}							
\perp		<u> </u>						



<u></u>					
20	Gamma-Ray (GAPI)	80	200	EM39 (mmho-m)	0
0	Line Speed (ft/min)	50	0	RILM (Ohm-m)	100
[100	RILM back-up (Ohm-m)	200
Ì			400	EM39 back-up (mmho-m)	200

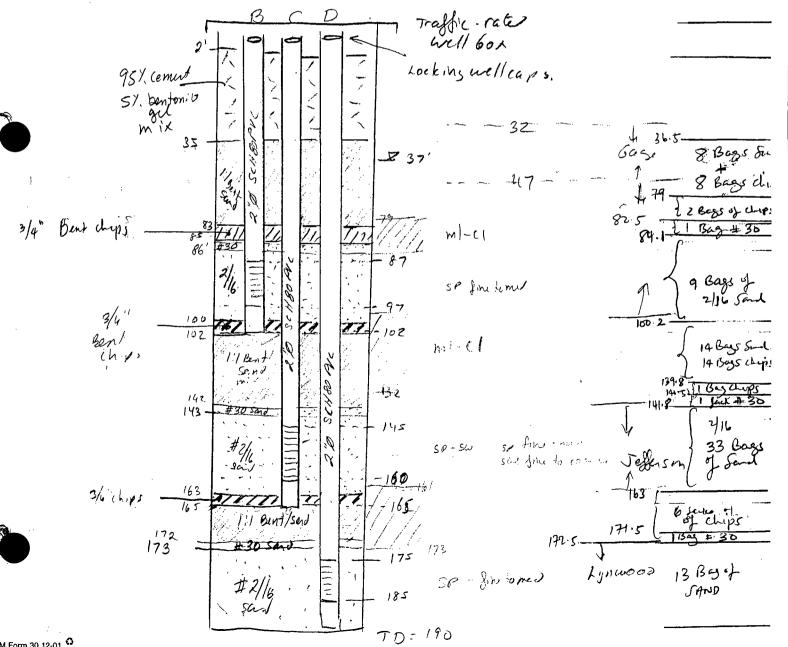


	PAGE
SUBJECT:	BY: DATE:
JOB NO:	CHKD: DATE:
Jell Construction PMW23	Jup to 66 @ E But * Sout @ 1860 * Sout @ 1860 * Such incomprised & * The continued of
to Modification (5/25/05 by	

Deep well MW23D completed in Lynword

MW23C completed in Jeffers in

MW23B complete bottom of Hollydale.



ARCADIS

Appendix E

Well Development Logs

ARCADIS

'Well Development Log

Project Name Ject Numbers	me OMEGA mber CAGO nnel STEPI	CHEMICAL 46.61.11 HEN CTYGON	ir-z ir//woc			W	ell ID# <u>fm</u> Date <u>\$-</u>	W 12 16-05
			·		Casing Type			Other
(circle one)	IETER (inches)		3	4	-	8	12	
	EAR FOOT			0.66 •••	1.5	2.6	5.8	OTHER:
TD 102 -	DTW 66.81 DTP 93.6. 8/16/05	water colum	<u>* gallons</u> = linear foot	5.97 X	casing volume	17-71 S 4-3-	calculated purge	ACTUAL PURGE
DATE PURGED	8/16/05	* 8.33	≈ START (2400 hr) _			4.45)
			START (2400 hr)					
TIME (2400 hr)	VOLUME (gallons)	pH (units)	CONDUCTIVITY mS/cm / umhos/c	ORP (mV)	TEMP. (°F / °C)	DO (mg/L)	TURBIDITY (NTU)	COLOR (visual)
						· /		
-								
			``,	· · ·				
 								
				.:			·	
			7					
	-							
			·					
A \	lab.88 LBA			FINAL DTW _				
REMARKS/CO	MMENTS 1	mitally -	Brited -	10 gal	los of Ho	20		
Nated	for Has	to rec	Brite - Lage: Ho bailed (Hw)	us lived	$\frac{2}{1} = \frac{\sqrt{3}}{2}$	· 6)	@ 15	36.
Hard	Bailed	well !	barted (Hw) well	ary @ -	C (61'		, =
COMPLETED E	ov Steple 8.	Congarpi	_ :			SIGNAT	URE	
VED BY		V i				DATE		

ARCADIS

'Well Development Log

Project Name O McLA Project Number C A O Field Personnel Dak	Chun 06 646	012	Well ID# MW 13B				
Held Personnel_/_/AZ	/ W D.C.			Casing Type	PVC	St. Steel	Other
CASING DIAMETER (Inches)	2	3	4	6	8	12	OTHER:
(circle one) GALLONS/LINEAR FOOT	0.17	0.38	0.66	1.5	2.6	5.8	OTHER:
TO 139 - DTW 81.6	= 54.4 water colum	<u>• gallons</u> =	9,193	casing volume	<u> 4ς</u> ε	calculated ,	ACTUAL 470
) .
DATE SAMPLED		START (2400 hr) _					
TIME VOLUME (2400 hr) (gallons)	pH (units)	CONDUCTIVITY ms/cm / umhos/c	ORP	TEMP, (°F / °C)	DO (mg/L)	TURBIDITY	COLOR (visual)
(2400 hr) (gations)	wines	IIISCIII7 UIIIIOS/C	(mv)	1 17 0	แแลงก	(410)	(ACACIA)
10155 52.5							
11:60 105							
11:25 157.5							
11: 10 157.5							Lowa pump
11:55 210		· · · · · · · · · · · · · · · · · · ·					,
12110 21,2							· · · · · · · · · · · · · · · · · · ·
12:40 314							
12155 366							
11:10 418							
1:30 470							·
							· · · · · · · · · · · · · · · · · · ·
·							
		· ·					
							·
				<u> </u>			
INITIAL DTW SIL			FINAL DTW _				
REMARKS/COMMENTS			· · · · · · · · · · · · · · · · · · ·				
	·	······································	······································				
							<u> </u>
COMPLETED BY					SIGNAT	URE	
VIEWED BY		<u> </u>			DATE		

Q:\common\forms\groundwater purging.xis \$45/2005

<u>S0</u> ,9	_ JATOT													
MOG		MDC JO	3#:2A6M	05	LOCATIO	ON: W	111	12x	RIG #	1: 1/0-1	/ DATI	: 716	, 1	65
FROM	то	TOTAL	法和				DÉSC	RIPTIO	OFACTIVITIE	Sydney	350			
									-			•		
J'30	7100	1,5	MOB	(T) S	: / >~									
	7:50	سره	Sc7 - 4				. 3	·						
100		73			d BALL MW13B									
7130	10150	3	5 MALL		/) //	· <u> </u>				.4				
10.37	1130	13	5e7-1	SMP		+ +	OVM	<i>y</i>	MW 13 1	<u>s</u>				
	ļ. —													
			ADO	5_	CAL		<u>DI</u>	W	070	<u> 75_</u>	MW	13 A		
	<u> </u>		SURVE	- A	Br	<u>} </u>	Dr	<u> 1/ /</u>						
 -											· · · · · · · · · · · · · · · · · · ·			
	MA	TERIALS		gir in a	FOU	PMENT	FRVICE	RECO	20	FX	PLANATIO	N OF STAN	DBY	yr i ar
Record Mat			Exploration & Wells	-		End Of Shi				-				
Ite	em	Unit	Quantity	Description	Srvc Int.	Equip.#	Last S	ervice	Hours/Miles					
Gravel Pack	Sand	SacivFoot	1	Carrier Engine	Fitr 250 Hrs. Q1 1000 -Hrs									
₹ranstion Si	and	Sack/Foot	i	Deck Engine	Fitr 250 Hrs. Oil 1000 Hrs.									
Bentonite Pe	dets	Bucket/Feet	1	Rig Tender	10000 Mis									
Cement		Sack/Foot		Support Truck	5000 Mis.	 				RECORD C	F INJURY/	ACCIDENT	NEA!	R MISS
entonite Po		Sack/Foot	/	Forklift Forklift	250 Hrs. 250 Hrs.					 				
entonite Ch rolciav Grau		Sack/Foot Sack/Foot	,	Compressor	Fitz 250 Hrs.	 				 				
Sand Grout		Yarc/Foot	· ,	Compressor	Oil 1000 Hrs. Fitr 250 Hrs. Oil 1000 Hrs.	-				 				
Enhanced G	Srout	Sack/Foot	,	Shaker	250 Hrs.						DAILY SA	ETY TOPK	;	
Centralizers		Éach		Mud Pump	250 Hrs.								*****	**********
Threaded Ca	ap	Each		Mud Pump	250 Hrs.									
Sho Cao		Each		Generator	250 Hrs.					<u> </u>				
Expansion P		Éach		Welder/Gen.	100 Hrs.	ļ				 				
<u> </u>	Manument	Each		Steamdeaner	100 Hrs.			-			VA LOST T		_	
	Flush Cover	Each Sack				ry & MECH				DAYS W		ME IN 2004		
Concrete		Sack		Windows					lamps Brakes	Hole #	From	STATISTICS		Total
. apia Set G	rout	Sack		1	•	-			Operating Labers					
Lock		Each		Equipment G		•		-	-					
⊃V¢ Gioves		Pair		Discharge He	oses Hydra	ulic Hoses	Water Hose	≝ Wud H	oses Air Hoses					
Tyvox Suits		Eacu		1	-			•	llar Slips/Bowis					
Sample Line	:r\$	Şaca		1		-			Saiety Manual		!			
ರು:e 50xes		Eaca		1	•				Fuel Transier Pluma		i	active		
Solms		Eaca		Casing Ham Equip. #					g Sit Subs	-	COM	MENTS		
Visqueen		Roit		Equip. #		Action Ne	evea (, cned	. It Mous	 				
 -	 -			 	-				<u>, , , , , , , , , , , , , , , , , , , </u>	 				
 										 				
										TOTAL R	G HOURS	WORKED		
Casing	Ту	pe	Schedule	Diameter	Feet	Misc.	Unit	Quan:	CLIENT REP:					
Blank	DVC MS	SS HOPE	5 10 40 80			Per Diem	Print Day	L ar 41	CLIENT JOB #:					

PVC MS SS HOPE 5 10 40 80

PVC MS SS HDPE 5 10 40 80

Prsn Day

Level C

OPERATOR: / JALL

RIG HAND:

RIG HAND:



ARCADISDaily Log

AIRLIFTING

Project Name: Omega Chemical	Project Number: <u>CA000646.00001</u>	Task 00008	Page of
Site Location Washington	n + Lambert st.	Date_	06-08-06
J J			

Field Personnel WEW # MW - 14

Time Description of Activities

16 0	Description of Activities									
Voc. Pumpeo	TEMP	PH	CONDUCTIVITY	ORP	TURBIOITY					
STARTED	AIRLIFTING									
	22.1	8.17	1.50		999 t					
	22.4	8.11	1.51		905					
	22.1	8.09	1.50		343					
	22.2	8.08	1.50		170					
	22.3	8.07	1.51		108					
•	22.3	8.07	1.50		70					
	22.5	8.04	1.50		55					
	22.5	8.04	1.50		38					
	22.5	8.03	1.50		30					
	22.5	8.03	1.51		25					
	22.4	8.02	1.51		20					
	22.5	8.0Z	1.51		. 15					
SHUT THE	AIR OFF,	DROP TO	75' + 801	70M .						
AIRLIFTING	ALGAIN			-	-					
	,22.7	8.03	1.50		501					
	23.0	8.00	1.50		80					
	23.1	8.00	1.50		47					
	23.1	8.00	1.50		35					
	23.1	8.01	1.51		10					
		, .								
		. :	· ·							
	SHUT THE AIRLIFTING	STARTED AIRLIFTING 22.1 22.4 22.1 22.2 22.3 22.3 22.5 22.5 22.5 22.5 22.5 22.5 22.5 22.5 22.7 23.0 23.1 23.1 23.1	STANDED GIRLIFTING 22.1 8.17 22.4 8.11 22.1 8.09 22.2 8.08 22.3 8.07 22.3 8.07 22.5 8.04 22.5 8.04 22.5 8.03 22.5 8.03 22.5 8.03 22.5 8.02 SMUT THE AIR OFF, DROP TO AIRLIFTING AGAIN 22.7 8.03 23.0 8.00 23.1 8.00 23.1 8.00 23.1 8.00	STANDED PRINCIPUNG 22.1 8.17 1.50 22.4 8.11 1.51 22.1 8.09 1.50 22.2 8.08 1.50 22.3 8.07 1.51 22.3 8.07 1.50 22.5 8.04 1.50 22.5 8.04 1.50 22.5 8.03 1.50 22.5 8.03 1.51 22.6 8.02 1.51 22.7 8.03 1.50 23.1 8.00 1.50 23.1 8.00 1.50 23.1 8.00 1.50 23.1 8.00 1.51	STARRED PRINCIPUNG 22.1 8.17 1.50 22.4 8.11 1.51 22.1 8.09 1.50 22.2 8.08 1.50 22.3 8.07 1.51 22.3 8.07 1.50 22.5 8.04 1.50 22.5 8.04 1.50 22.5 8.03 1.50 22.5 8.03 1.51 22.6 8.02 1.51 22.5 8.02 1.51 22.7 8.03 1.50 23.1 8.00 1.50 23.1 8.00 1.50 23.1 8.00 1.50 23.1 8.00 1.51					



Project Name: Omega Chemical	Project Number: <u>CA000</u>	646.00001 Task 00008	Page of
Site Location Washing	ton & Lambert	ndDate	06-08-06
Field Descended		Well # mw-	12/
Field Personnel		1/VWL 11/W-	<i>17</i>

Time			Descriptio	n of Activities		
	Va. Pumpeo	TEMP	I	CONDUCTIVITY	0120	TURBIDITY
12:00	Started	pumping	e 2.5 gpm			
12:10		25.9	7.35	1.53		94
12:20		25.9	7.31	1.52		43
12:30		24.4	7.24	1.52		7
12:40		24.5	7.24	1.52		2 2 2
17:50		24.5	7.15	1.52		2
1:00		24.5	7.15	1.52		2
					<u> </u>	
				· · · · · ·		
			•			
		· J				
		·				

ject Nar Ject Nur Field Perso	me OMEGA mber CAGH nnel F. A.	41 Em 1920 0.01.11 Cr WDC	-1			W	ell ID# Pn Date 8	1W15 16/65
		1			Casing Type	PVC	St. Steel	Other
CASING DIAM	IETER (inches)	(2)	3	4	6	8	12	OTHER:
(circle one) GALLONS/LIN	EAR FOOT		0.38	0.66	1.5	26	5.8	OTHER:
							calculated	ACTUAL 115+10 (Ball
	8/16/05		START (2400 hr) _)
			START (2400 hr) _		· ·)
TIME	VOLUME	рН	CONDUCTIVITY	ORP	TEMP (°F(°C)	DO	TURBIDITY	COLOR
(2400 hr)	(gallons)	(units)	mS/cm2/ umhos/c	(mV)	(°F(°C))	(mg/L)	(NTU)	(visual)
1305	1.5	6.74	1 10	\ /	25.0	G 21	71.1.	Hazy/ Cloudy
1320	10	6.74	1.40	 		9.26	840	<i>n</i> 0
1330	25	10.85	1.38	 	25.1	9.29	105	cleer
1340	35		1.38	 \ 	24.9	9.27	65	"
1350	4 5	6.79	1.37	 	25.3	9.17	60	"
1400	55	6.90	1.38		253	9-18	50	<i>"</i>
1410	65	6.90	1.40	1-1-	25.4	9.62		u u
ro	75	6.88	1.40	- \ 	25.4	9.87	20	11
1430	85	lo-88	1. 40	 	26-6	9.66	15	
1440	95	10.89	1.42	 	25.7	9.65		
1450	105	7.00	1.42	 	25.6	9.32	5	u
1500	115	6.99	1.42	//	25.6	9.32		10
1700		<u> </u>	1 7 ~	-/\		1.75	-3-	
						-		
INITIAL DTW	25.92			FINAL DTW _	25.57			
REMARKS/COI	MMENTS	Bailed 14	tend) ~ 10	Galina				
·								
COMPLETED E	sy Stephen	A- Gym	*			SIGNAT	URE	
WED BY		<i>,</i>				DATE		

ect Name act Number of Person	thaniuft 646.000				oldos			
	-	<i>2</i> :			Casing Type	PVC fo	₽80 St. Steel	Other
CASING DIAM	IETER (inches)	$\left(\widehat{2}\right)$	3	4	6	8	12	OTHER: 2 1/2 "
GALLONS/LIN	EAR FOOT	0.17	0.38	0.66	1.5	2.6	5.8	OTHER:
TD LOS	-DTW 35.60	= 298 water colum	<u>* gallons</u> = linear foot	<u>S,(</u> ,	casing volume	<u>2</u> 5 es (calculated purge	ACTUAL PURGE
	6/7/05		START (2400 hr) _	1450	(No Recore	rg)		7)
DATE SAMPLED			START (2400 hr)	· · · · · · · · · · · · · · · · · · ·			END (2400 h	1
TIME	VOLUME	pH (units)	CONDUCTIVITY	ORP	TEMP (°F / °C)	DO (mg/l)	TURBIDITY	COLOR
(2400 hr)	(gallons)	tunitsi	mS/cm / umhos/c	(mV)	()	(mg/U	(NTU)	(visual)
10100								welldry.
ļi							 	
 							 	
				-		,		
			<u> </u>			<u> </u>		
·								
·								
ļ								
.}								
·}								
INITIAL DTW				FINAL DTW _				
REMARKS/COI	MMENTS	hell is	dry CI	50 · F	inged 1	sell !	4 Alm	ted well-No t. and well went
-31P	100	LOVYY	de di	al 11	0000	4	<i>-</i>	1 11 11
AT INS	red Well	w1 ≥ ~ 3	10-40 Sc//ms	J- 1721	· neum	~ 71e	som an	T. and ver went
COMPLETED	or Stepter	A. Cryan	‡	V		SIGNAT	TURE	22-e-
VED BY	•		<u>.</u>			DATE		

ect Nar ect Nur d Perso	me OMEGA mber CA 660 nnel SA G	CHEMICAL COURSE	M-2 -0009			Sd	. \$0	1168 (1MT) 17105		
CASING DIAM (circle one) GALLONS/LIN	IETER (inches)	(0,1/	3 0.38	4 0.66	Casing Type 6 1.5	8 2.6	St. Steel 12 5.8	Other 21/2" OTHER:		
		•					calculated	ACTUAL 3/2		
DATE PURGED	6/7/05		START (2400 hr)	1330			END (2400 hr	, 1422		
DATE SAMPLED	· · · · · · · · · · · · · · · · · · ·		START (2400 hr) _)		
TIME (2400 hr)	VOLUME (gallons)		CONDUCTIVITY ms/cm umhos/c	ORP (mV)	TEMP (°F /(°C))	DO (mg/L)	TURBIDITY (NTU)	COLOR (visual)		
1334	24	6.92	T.73		22.8	9.48	999	Dane		
1338	48	7.60	1.62		22.8	9.52	408	Haze		
1342	72	7-68	1.61		22.7	9.37	112			
1346	96	7.07	1. les		22.6	9.27	95	11		
1350	126	7.59	1.62		22.7	9.26	24	Slight Haze		
1354	144	7.11	1.63		22.6	9.27	9	<u>r</u>		
1358	168	7.11	100		22.5	9.35	10	И		
102	192	7.11	1 63		25.6	9.39	10	Ч		
406	216	7-11	1. le3		206	9.40	10	very sight haze		
1410	240 244	7.11	1.62		22.5	9.33	10	H .		
1414		7.10	1.63		22.7	950	10	-0		
1418	288	7.11	1.63		22.6	9.50	to	clear		
1422	312	7:11	1.63		22.6	9.50	10	Cloer		
}			<u> </u>							
 										
 										
										
INITIAL DTW	50.40			FINAL DTW _		·				
REMARKS/CO	MMENTS	Ex Th	· bidity	Readi-	J 10		-			
COMPLETED	COMPLETED BY Staylen A. Gyarfi SIGNATURE (1632-01)									
	′		•			DATE				

ect Nan	ne 6MEGA mber CA o	CHEMICAL 601046.0	101-L 001.0009			W	ell ID# M Date U	WIGC (DEEP)
•	314	WE IS Q	<i>)1)</i> /*** ·		Casing Type	(BUC 8	of Stool	Other
CASING DIAM	ETER (Inches)	2	3	4	6	8	12	OTHER: 2 1/2"
(circle one)			·		-			
	EAR FOOT		0.38	0.66	1.5		5.8	
TD 169	-DTW 21.35	= 117,45	<u>* gallons</u> = linear foot	20	本 S casing	100	calculated	ACTUAL 290
	617105		START (2400 hr) _					1315
DATE SAMPLED			START (2400 hr)		·····		END (2400 hr)
TIME (2400 hr)	VOLUME (gallons)	pH (units)	CONDUCTIVITY ms/cm) umhos/c	ORP (mV)	TEMP (°F (°C)	DO (mg/L)	TURBIDITY (NTU)	COLOR (visual) Dane
1057	42	7.33	1.14		22.7	10.11	999	(mine)
1104	84	7.40	1.09		22.3	10.26	412	Commer (reinser)
- 11]1	126	7.49	ماه.		22.6	10.15	333	11/239
1118	168	7.51	1.03		12.5	10.22	298	Hazy
1125	170	7.53	1.02		22.5	10.84	4260	H-274
1132	212	7.48	1.64		22.4	1072	112	#
1139	254	7.45	1.01		22.3	10.51	214	Ų
146	296	7.49	1.02		22.4	10.78	188	G
153	338	7.48	1.62		22.3	10.73	506	ui
1240	380	7.47	1 02		24.7	15.53	288	7
1247	422	7.52	1.00		23.4	11-30	405	\$ _t
1254	464	7.50	1.01		23.2	11.62	450	Ų
1301	504	7.50	1.00		23.0	11.15	290	· v
1308	548	7.43	1.00		22.8	10.63	270	n
1315	190	7.44	80.1		22.6	10.50	290	£1
			•					
	,							
INITIAL DTW	51.55			FINAL DTW	No Read in	o (ins	trusest	medfusetin)
REMARKS/COM	MENTS	Shut dan	per recla					
								
COMPLETED B	v Slepten p	1. Cryanifi				SIGNAT	URE K	52-e-
,√ED BY						DATE		

ject Name	ohn	n			W	Vell ID# Mu Date 6	1 18 A 127/05-6/28
.				Casing Type	PVC	St. Steel	Other
CASING DIAMETER (inches)	2	3	4	6	8	12	OTHER:
(circle one) GALLONS/LINEAR FOOT	0.17	0.38	0.66	1.5	2.6	5.8	OTHER:
TD 76 - DTW 29	= 4) water colum	<u>* gallons</u> = linear foot	7.661	casing volume	s	calculated purge	
DATE PURGED 6-27/6	,-28	START (2400 hr) _				END (2400 hr	0
DATE SAMPLED		START (2400 hr)				END (2400 hr)
TIME VOLUME (2400 hr) (gallons)	pH (units)	CONDUCTIVITY ms/cm / umhos/c	ORP (mV)	TEMP. (°F / °C)	DO (mg/U	TURBIDITY (NTU)	COLOR (visual)
2415	1					_	
14130 75							
14145 112	<u> </u>					830	
15100 149						635	
15:15 116						304	
15130 225						165	
15145 260						59	
16100 297						49	
200						}	
<u>6-28</u>			-		 		
0830						212	
5145 334						155	
09100 371			·			3.55	
09:15 408						7.42	
09:30 445						1.45	
INITIAL DTW			FINAL DTW _				
REMARKS/COMMENTS						· 	
	, <u> </u>					·	
COMPLETED BY					SIGNA	TURE	
VED BY		·····			DAT		

pject Name Ones oject Number Fleld Personnel Gleph	a Chu				w	ell ID# <u>/8</u> Date	MU-18-18	
ricia reisolinei Sie ph	day							
	\sim			Casing Type		St. Steel	-	
CASING DIAMETER (Inches)	(2)	3	4	6	8	12	OTHER:	-
(circle one) GALLONS/LINEAR FOOT	0.17	0.38	0.66	1.5	2.6	5.8	OTHER:	_
TD 105-DTW 29	= <u>lo</u> water colum	<u>* gallons</u> = linear foot	12.388	casing volume		calculated purge	ACTUAL PURGE	_
DATE PURGED		START (2400 hr)		·		END (2400 hr)	_
DATE SAMPLED		START (2400 hr)				END (2400 hr	.)	_
TIME VOLUME (2400 hr) (gallons)	pH (units)	CONDUCTIVITY	ORP (mV)	TEMP.	DO (mg/L)	TURBIDITY (NTU)	COLOR (visual)	7
1020 -	(unics/	pris/crit/ diffitos/c	(IIIV)	1,7,6	(IIIg/L)		Dark Brown	1
10:15 52						364	CLOOLY	1
10:30 104			1			52.6	Chris	1
1045 156						4.42	01	شڪا
11:00 708						19.9	(/	Bu
11115 260						7.44	1,	1
11:30 312						358	11]
1135 364						1.72	4]
							<u> </u>	
			<u> </u>]
			<u> </u>]
			<u> </u>					-
							·	1
			<u> </u>					
		-						┨ ;
<u> </u>								┤ '
						ļ		4
			 					1
L	<u> </u>		<u> </u>			<u> </u>		J
INITIAL DTW			FINAL DTW		, •	\'		
REMARKS/COMMENTS						····		-
		·		····				-
								- .
COMPLETED BY					CICAIA	TIIDE	<u></u>	· ·
COMPLETED BY					JIOITA	- VRL		·.

(piect Nu	me OMEY mber ca C	o46.01.0	. 9			We	ell ID# MV Date &	W18 C [23] G5	
	and Perso	onnel Step	en the Lya	my		Casing Type	PVC	St. Steel	, Other	
	CASING DIAM	METER (inches)	(2)	3	4	6	8	12		
	(circle one) GALLONS/LIN	IEAR FOOT	0.17	0.38	0.66	1.5	2.6	5.8	OTHER:	
	TD	- DTW	=	<u>* gallons</u> = linear foot		casing		calculated	ACTUAL	
	DATE PURGED	Lel 23 6			1413/15		ts.	purge END (2400 hr	PURGE , 1740	
		NA		START (2400 hr) _					")	
	TIME (2400 hr)	* VOLUME	pH	CONDUCTIVITY	ORP	TEMP (°F/CO)	DO (m.a.l.)	TURBIDITY		
540		Inhid + 20	(units)	0.633	(mV)	27.0	(mg/L)	(NTU) 74	(visual)	
540	1555	40	7.84	0.631	\ 	24.1	4011.14		n	- x5h
			· · · · · · · · · · · · · · · · · · ·	0.618	 			406	" LLAR	— (^ ð
	llovo	\$0	7.82	0.6465	 	22.8	10.90			{
	1605		8.15		 	22.8	10.70		и	
	1610	10090	8.10	0-624		22.8	10.33		И	
	1618	100	8.02	0.621	 	22.7	10.31	140	<u> </u>	
	1628	140	7.92	0. tale	 	23.4	9.89	49	n	
	162	1900	8.00	0.616	 	23.1	9.85	42	jı .	
1	1636	180	7.95	ماامان		22.7	10.08	35	b	
	1235	140	8.05	0.619	 	22.9	9.93	29	31	
-;	- 1695	160	8.02	0-622	A	22-6	9.81	3 5	u	
	1700 Hoss	L80 190	8.16	مااما ، ٥		22-5	9.70	25		
	1710	210	8.60	0.616		22.8	9.67	10		
	1720	730	7.68	0.614		22.9	9.58	B]
	1230	250	7.53	0.614		22.5	9.80	4		
	1735	Nes	7.53	0.615		22.4	9.75			
: ;	1737	264	7.54	0.615		22.4	9.75	1		
					7					
	INITIAL DTW	34.61			FINAL DTW _	30.14	·			
	DEMARKSICO	MARKITE FR	N 4 cam	(e ~ 143	مستنصمه	and Stonein	After have	d/420 m	sishe)	
	T 4 1 1	WINEMIS 4	$\frac{1}{\sqrt{2}}$	1419	1 17/17	,				
٠.				co × \$5 sallo	m ; yy	of 420/mi	o pumpe	s before	· taking #20	
	Quality	Keldings	= 140 }	gallay		<u> </u>		<u> </u>		
	COMPLETED I	BY SEPHEN	A. GJAM	FI.			SIGNAT	URE TO	2-6	2
	ALTED DY						DATE			
*	MIS IMP	alto clean/	revol mr	ddy #20 =	140 gallo	ns	DATE	·	,	
	g:\commo	n\forms\groundwat	ER PURGING.xis			_		•		
	5/15/2005	10 VA	purqui (in ululais	Bulling) ~ 4.	50 54	Ins -		
٠.		1 1	· V				-			

Daily Log

Project Name: Omega Chemical	Project Number: <u>CA000646.00001 Task 000</u>	08	Page _ ′ of
Site Location PMW20	A	Date_	5/31/06
Field Personnel			

Time			Descr	iption of Activities	
	Vol Pumped	pomp	f# \	Conductivity	Orp Turbidity
10:50	70	23.6°C	7.20	1.50 ms/cm	Ore Turbistic
	90	23.7.6		1.47 ms/cm	1194
11:20	110	23.8-6		1.49 ms/cm	33
11:30	130	23,9c	7.32	1.48 ms/cm	33
11:50	150	23.8€	7:38	1.48 ms/cm	199
10:00	170	24.100	7:37	1.47 ms/cm	78
1.3	190	24.100			80
1 *	210	23.8.0	7.37	1.49 m5/cm	78
			1	†	

HIRUFTING

Project Name: Ome	ega Chemical	Project Number:_	CA000646.00001	Task 00008	Page	_ of	
Site Location	GEARY !	TELECALA	POH PD.	Date_	JUNE	05,	2004
Field Personnel	•	·	WELL	# MW 20	-A		

Time	me Description of Activities							
	UK. Pumped	Temp	PH	Conductivity	ORP	TURBIDITY		
10:10	storted	DUMPING						
10:20		22.4	8.95	1.48		999+		
10:30		22.9	8.80	1.51		999 t		
10:40		22.8	8.75	1.50	-	575		
10:50		22.9	8.95	1.50		458		
11:00		22.8	8.99	1.49		200		
11:10		23.2	9.01	1.48	=	113		
11:20		23.1	9.02	1.47		81		
11:30		23.3	9.02	1.47		79		
11:40		23.5	9.03	1.46		58		
11:50		23.5	9.01	1.46		50		
12:00		23.4	8.97	1.46		55		
12:10		23.5	8.96	1.45	<u> </u>	33		
12:20		23.8	897	1.45		33		
12.30		24.0	8.97	1.45		23		
12:40		24.0	8.96	1.45		18		
12:50		24.0	6.12	1.52		18		
1:00		24.5	8.05	1.46		16		
1:10		24.2	8.24	1.45		15		
1:20		24.7	8.26	1.45		17		
1:30		25.8	8.28	1.46		18		
1:40		25.2	8.29	1.45		10		
1:50		24.9	8.29	1.45		10		
2:00		25.5	8.28	1.45		7		
2:10		25.6	8.29	1.45		5		

Project Name: Omega Chemical Project Number: CA000646.00001 Task 00008 Page of
Site Location GEARY & TELEGRAPH RD. Date 06-01-06
Field Personnel WELL* MW-20-B

Time Description of Activities Vol Pungul Time pH Conductivity OR P Tuctivity 9:28 30 gals 21.5 8.61 1.47 353 353 9:48 30 gals 22.0 7.60 1.50 198 10:08 30 gals 22.1 7.65 1.49 10:4 10:18 30 gals 22.0 7.70 1.50 10:4 10:28 30 " 22.0 7.71 1.49 7.2 10:38 30" 22.2 7.73 1.49 69 10:48 30" 22.2 7.73 1.51 63 11:08 30" 22.1 7.72 1.50 64 11:08 30" 22.1 7.72 1.50 54 150							
9:28 9:38 30 gals. 21.5 8.61 1.47 353 9:48 30 gals. 22.0 7.60 1.50 198 9:58 30 gals 21.9 7.70 1.50 106 10:08 30 gals 22.1 7.65 1.49 104 10:28 30 " 22.0 7.71 1.49 72 10:38 30" 20.1 7:73 1.49 69 10:88 30" 22.2 7.73 1.51 63 11:08 30" 22.1 7.72 1.50 54	Time			Description	on of Activities		
9:38 30 gals. 21.5 8.61 1.47 353 9:48 30 gals. 22.0 7.60 1.50 198 9:58 30 gals 22.1 7.65 1.49 104 10:08 30 gals 22.0 7.72 1.50 77 10:38 30" 22.1 7:73 1.49 69 10:88 30" 22.2 7:73 1.51 63 11:08 30" 22.1 7:72 1.50 54		Vol Punpe	Tema	•			1
9:48 30 gals. 22.0 7.60 1.50 198 9:58 30 gals 21.9 7.70 1.50 106 10:08 30 gals 22.1 7.65 1.49 104 10:18 30 gals 22.0 7.72 1.50 77 10:28 30" 22.0 7.71 1.49 72 10:48 30" 22.1 7:73 1.49 69 10:88 30" 22.2 7.73 1.50 64 11:08 30" 22.1 7:72 1.50 54	9:28			PH	Conductivity	ORP	Turbivity
9:48 30 gals. 22.0 7.60 1.50 198 9:58 30 gals 21.9 7.70 1.50 106 10:08 30 gals 22.1 7.65 1.49 104 10:18 30 gals 22.0 7.72 1.50 77 10:28 30 11 22.0 7.71 1.49 72 10:48 30" 22.1 7.73 1.49 69 10:88 30" 22.2 7.73 1.50 63 11:08 30" 22.1 7.72 1.50 54	9:38	30 gals	5. 21.5	8/01	147		
9:58 30 gals 21.9 7.70 1.50 106 10:08 30 gals 22.1 7.65 1.49 104 10:18 30 gals 22.0 7.72 1.50 77 10:28 30 " 22.0 7.71 1.49 72 10:48 30" 22.1 7.73 1.49 69 10:88 30" 22.2 7.73 1.50 63 11:08 30" 22.1 7.72 1.50 54	9:48	30 gals	. 22.0		<u> </u>		
10:08 30 gals 22.1 7.65 1.49, 104 10:18 30 gals 22.0 7.72 1.50 77 10:28 30 " 22.0 7.71 1.49 72 10:38 30" 22.1 7.73 1.49 69 10:88 30" 22.2 7.73 1.51 63 11:08 30" 22.1 7.72 1.50 54	<u> </u>	30 gals	21.9		†		
10:18 30 gals 22.0 7.72 1.50 77 10:28 30 " 22.0 7.71 1.49 72 8 10:38 30" 22.2 7.73 1.51 63 10:88 30" 22.2 7.73 1.50 64 11:08 30" 22.1 7.72 1.50 54		1 0000	22.1				
10.28 30" 22.0 7.71 1.49 72 10:38 30" 22.1 7.73 1.49 69 10:88 30" 22.2 7.73 1.51 63 11:08 30" 22.1 7.72 1.50 64 12:08 150" 32.1 7.72 1.50 54	<u> </u>	30 gals	22.0				
10:88 30" 22.1 7:73 1.49 69 10:88 30" 22.2 7:73 1.51 63 10:88 30" 22.2 7:73 1.50 64 12:08 150" 32.1 7:72 1.50 54			22.0	7.71			70
10:48 30" 22.2 7.73 1.51 63 10:88 30" 22.2 7.73 1.50 64 11:08 30" 32.1 7.72 1.50 54			22.1				
11:08 30" 22.2 7.73 1.50 64 12:08 150 " 54	, 		22.2				
11.08 30" 22.1 7.72 1.50 54 12:08 150 "				7.73	1.50		
			22.1	7.72			
TOTAL 450 GAS	12.08	150 "					
TOTAL 480 GALS							
TOTAL 480 GALS							
	TATAI	1160 ()					
	10136	700 GALS					
			-				
	<u>l</u>	<u>.</u>					

AIRUPTING

Project Name: Omega Chemical	Project Number: CA000646.00001 T	Гask 00008	Page	_ of
Site Location GEARY #	TELEGRAPH RD.	Date_	SIME	02,2006
Field Personnel		MW 20	B	

Time		Description of Activities							
	VOL. PUMPED	TEMP "	PH	CONDUCTION	ORP	TURBIDITY			
5:15	Voc. Pumper Started	Pumping.	1	ı	•				
5:30		22.2	8.74	1.47		313			
5:40		21.7	8.74	1.48		150			
5:50		21.6	8.69	1.49		117			
6:00		21.2	8.66	1.47		72			
		· · · · · · · · · · · · · · · · · · ·	 						
		· · · · · · · · · · · · · · · · · · ·	 						
		•							
<u> </u>					<u> </u>				
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	<u> </u>								
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HIRLIFTING

Project Name: Omega Chemical	Project Number: CA000646.00001	<u>Task 00008</u> Page of
Site Location CETTRY	E TELECRAPH RD.	Date JUNE 05, 2000
Field Personnel	WELL	# MW 20-B

Time	Description of Activities							
	VOL Pumpe		PH	Consuctivity	ORP	TURBIDITY		
8:00	started	AIRLIFTING						
8:15		21.5	8.87	1.52		420		
8:30		21.3	8.64	1.49		73		
8:40		21.2	8.61	1.48		22		
8:50		21.5	8.58	1.51		18		
9:00		21.6	8.56	1.48		17		
9:10		21.5	8.55	1.51		8		
9:20		21.5	8.55	1.46		7		
9:30		21.5	8.58	1.51		5		
9:40	·.	21.6	8.58	1.49		5		
				-				
			· .	·		·		
	· ·	<i>y</i>						

HIRLIFTING

ARCADIS Daily Log

Project Name: Omega Chemical	Draiget Number	C 4 0 0 0 C 4 C 0 0 0 0 4	Took 00000	Dogo	a f	
Tolect Name. Omega Chemical	Project Number.	CA000040.00001	Task UUUUo	Page	OI .	

Site Location GEARY & TELEGRAPH RD. Date GUNE 02, 2006

Field Personnel WELL MW 20-C

Time	Description of Activities							
	VOL Pumped	TEMP	PH	Conouctivity	ORP	TURBIDITY		
10:30	Started	Airlifting	:			V. MUDDY		
11:00		25.0	8.89	1.15		946		
11:30		23.7	8.73	. 934		355		
11:45		23.5	8.54	. 905		668		
12:00		23.4	8.47	. 889		38/		
12:15		23.7	8.47	. 884		492		
12:30		23.4	8.51	. 872		160		
12:45		23.7	8.54	. 873	:	98		
1:00		23.6	8.61	. 874		131		
1:15		23.8	8.66	.868		64		
1:30		23.8	8.74	. 863		71		
1:45		23.5	8.82	. 861		38		
2:00		23.5	8.85	.860		35		
2:15		23.4	8.86	.858	· · · · · · · · · · · · · · · · · · ·	31		
2:30		23.3	8.92	. 858		89		
2:45		23.3	8.88	.856		118		
3:00		23.1	8.87	. 854	1	42		
<i>3:1</i> 5		22.9	8.87	.853		18		
3:30		23.1	8.86	.852	· · · · · · · · · · · · · · · · · · ·	13		
3:40		23.0	8.86	. 852		10		
3:50		22.8	8.90	. 852		7		
3:55		23.0	8.87	. 85/		5		
4:00		22.9	8.87	. 850		5		

AIRUFTING

ARCADIS Daily Log

			1	2
Project Name: Omega Chemical	Project Number: <u>CA000646.00001 Task 00008</u>	Page	of_	

Site Location <u>Geory & Telegraph</u> Rd. Date <u>Guve 13, 2006</u>

Field Personnel <u>Well # MW 20-A</u>

Time	 		Descriptio	n of Activities		
	Voc. Pumped	TEMP	PH	CONDUCTIVITY	ORP	TURBIDITY
8:00	Started	airlifting	@ 8.00	-		
a ·						
2:00	continued	toairlift	and surg	E, surgeo	1 for 5'm	ins
2:10	Started	taking red	adings			
		26.2	8.12	1.46		999
2:15		26.3	8.//	1.44		878
2:20		26.1	7.97	1.46		157
2:25		26.1	7.87	1.47		28
2:30		26.0	7.83	1.47		52
2:35		26.1	7.75	1.45		32
2:40		26.1	7.76	1.46		
2:45	•	26.0	7.77	1.46		13
		. ',				
		•				

PumpinG

ARCADIS Daily Log

Project Name: Omega Chemical Project Number: CA000646.00001 Task 00008 Page 2 of 2

Site Location <u>GEORY & Telegraph</u> Rd. Date <u>JUNE 13, 2006</u>
Field Personnel <u>Well # MW 20-A</u>

Time			Descriptio	n of Activities		
	Voc. Pumpeo	TEMP	PH	CONDUCTIVITY	ORP	TURBIDITY
3:40	started	pumping	e 49pm			
3:50		23.2	7.59	1.47	······································	20
4:00		22.9	7.30	1.47		10
4,10		22.9	7.14	1.47		5
4:20		22.9	7.14	1.47		4
4:30		22.9	6.99	1.47		3
4:40		22.9	6.99	1.47		<i>3 3</i>
4:50		22.9	6.99	1.47		3
5:00		22.9	6:99	1.47		3
	•					
		. ',				
		·				·
	·					
						



ARCADIS Daily Log

Project Name: Omega Chemical Project Number: <u>CA000646.00001 Task 00008</u> Page of	roject Name: Omega Chemica	Project Number:	CA000646.00001	Task 00008	Page	of
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Site Location Georg & TElegraph Rd. Date JUNE 12, 2006

Field Personnel Well # MW 20-B

Time			Descriptio	n of Activities		
	Voc. Pumpeo		Þн	CONDUCTIVITY	ORP	TURBIOITY
	started p		2.5 gpm			
3:50		24.1	7.48	1.49		216
4:00		23.6	7. 25	1.48	~	30
4:10		23.5	7.17	1.49		13
4:20		22.4	7.05	1.50		6
4:30		<i>2</i> 2.3	6.95	1.50		2
4:40		22.3	6.95	1.50		Z
4:50		22.3	6.95	1.50		2
		-				
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		,) ,				

ARCADIS Daily Log

Project Name: Omega Chemical	Project Number:	CA000646.00001	Task 00008	Page	of

Site Location Geory * Telegraph Rd. Date June 12, 2006

Field Personnel Well # MW 20 - C

Time			Descriptio	n of Activities		
	Voc. Pumpeo		PH	CONDUCTIVITY	ORP	TURBIDITY
5:00	Started	pumping	e 4gpm			
5:10		22.6	7.48	. 817		7
5:20		22.7	7.90	. 763		18
5:30		23.6	7.68	. 858		8
5:40		23.5	7.66	. 857		5
5:50		23.6	7.67	.854		3
6:00		23.6	7.66	. 854		1
6:10		23.6	7.66	.854		/
6:20		23.6	7.66	. 854		1
					<u> </u>	
	-					
					•	

					<u> </u>	
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Daily Log

Project Name: Omega Chemic	al Project Number: <u>CA000646.00001 Tas</u>	sk 00008 Page of
Site Location SCRENE	SEN AVE. & Burke st.	Date SUNE 06, 2004
Field Personnel	WEU # E	EW 1

Time			Description	on of Activities		
	Voc. Pumpeo	TEMP	PH	CONDUCTIVITY	ORP	TURBIOITY
10:30	Started	Air lifting				
12:50		<i>23</i> .7	7.76	1.74		837
1:10		24.1	7.90	1.75		29
1:20		24.1	7.88	1.75		45
1:30		22.9	7.84	1.75		15
2:20		23.4	8.02	1.74		34
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		<u>.</u>				

ARCADIS Daily Log

Project Name: Omega Chemical Project Number: CA000646.00001 Task 00008 Page of

Site Location SORENSEN AVE & BURKESE. Date JUNE 07, 2006

Field Personnel WELL EW-/

Time			Description	n of Activities		
	Voc. Pumpeo	TEMP	PH	CONDUCTIVITY	ORP	TURBIOITY
10:00	stanted	pumping				
10:10	178.60	22.4	7.45	1.75	· · · · · · ·	110
10:20	357.20	22.3	7.23	1.75		14
10:30	535.80	22.3	7.23	1.75		9
10:40	714.40	22.4	7.23	1.75		3
1:25	Started	pumping				
1:28	719.40	23.6	7.15	1.74		38
1:32	774.40	23. 2	7.16	1.75		33
1:37	799	23.0	7.09	1.75		2
1:40	829	22.9	7.06	1.75		1
1:43	854	23.0	7.06	1.79		3.6
1:46	874	22.9	7.07	1.75	· · · · · · · · · · · · · · · · · · ·	1
1:45	899	23.0	7.03	1.75		1-2
1154	Started Pu	mping.				₹
1:55	929	23.3	7.06	1.74		1
1157	Stop Pun	ibin' - gra	P & St.			
2:07	Started	Pumping				
2:09	954	23.2	7.03	1.75		6
2:12	984	23.0	7.03	1,75		1-2
2:15	1001	23.0	7.04	1.75		0
2:18	1028	22.9	7.04	1.75		0
2:21	1055	22.9	7.06	1.75		0
2:24	1082	22.9	7.05	1.75		0
27,31	1197 anothe 2 }	22.9	7.04 in let 0. 75	, 1.75		0
Pr gump	anoshi 2 3	Y				

15

Appendix F

XYZ Well Survey Data

					М	ONITORIN	IG WELLS	3						
WELL	NORTH	EAST	LATITUDE (DD)	LONGITUDE (DD)	TOR	FS/NG	TOC-A	TOC-B	TOC-C	TOC-D				
WELL	(UTM-11 METERS)	(UTM-11 METERS)	LATITUDE (DD)	LONGITUDE (DD)	(ELEVFT)	(ELEVFT)	(ELEVFT)	(ELEVFT)	(ELEVFT)	(ELEVATION)	RISER_HT-A	RISER_HT-B	RISER_HT-C	RISER_HT-I
MW-12	3759544.05	403349.18	33.9719957	-118.0462302	221.22	221.23	220.87				-0.36			
MW-13-	3759304.29	403429.28	33.9698410	-118.0453368	206.33	206.30	206.02	205.88			-0.28	-0.42		
MW-14	3759053.87	403113.19	33.9675538	-118.0487301	172.97	172.98	172.63				-0.35			
MW-15	3758539.73	402532.68	33.9628639	-118.0549556	148.65	148.57	148.28				-0.29	-148.57		
MW-16	3757951.13	401492.78	33.9574593	-118.0661432	153.47	153,50	153.19	153.26						
MW-17	3757463.42	401264.18	33.9530399	-118.0685620	159.40	159.42	159.03	158.90	159.00					L
MW-18	3757631.05	402590.55	33.9546753	-118.0542282	144.32	144.74	143.73	143.83						
MW-19	3756760.85	401687.06	33.9467442	-118.0639072	159.01	158.94	158.73				-0.21	_		
MW-20.	3756601.72	400670.84	33.9452137	-118.0748847	142.07	141.99	141.31	141.32	141.35		-0.68	-0.67	-0.64	
MW-21	3756893.99	400223.26	33.9478069	-118.0797607	129.27	128.91	128.81			·	-0:10			
MW-22	3757381.90	400466.19	33.9522296	-118.0771876	151.47	151.36	150.82				-0.54			
MW-23	3758349.18	402203.78	33.9611151	-118.0584936	149.36	49.35		149.06	149.07	學為148,040個				777-71331
EW-1	3758460.37	402022.79	33.9621008	-118.0604647	152.27	152.43	152.11				-0.32			
MW-08A	3758460.73	402024.99	33.9621043	-118.0604409	152.59	152.62	152.34				-0.28			T
MW-08B	3758457.80	402028.55	33.9620782	-118.0604021	152.50	152.54	152.20				-0.34			
MW-08C	3758457.80	402028.55	33.9620782	-118.0604021	152.50	152.54	152.23				-0.31			
MW-08D	3758462.12	402021.54	33.9621165	-118.0604785	152.27	152.43	152.11				-0.32			
OW-8B	3759212.72	403480.10	33.9690200	-118.0447767	201.43	200.81								

Professional's Name: Armando D. Dupont

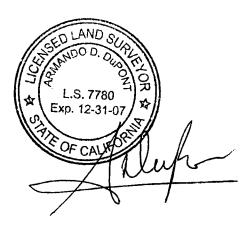
Professional's License Type: Professional Land Surveyor

Professional's License Number: 7780

NOTE: RISER_HT - RISER HEIGHT

RISER HEIGHT: THE MEASURED DISTANCE FROM GROUND SURFACE TO TOP OF WELL CASING DD: DECIMAL DEGREES

TOR: TOP OF RIM TOC: TOP OF CASING NG: NATURAL GROUND FS: FINISH SURFACE



	MONITORING WELLS											
WELL	NORTH	EAST	LATITUDE (DD)	LONGITUDE (DD)	TOR	FS/NG	TOC-A	TOC-B	TOC-C			
WELL	(UTM-11 METERS)			LONGITUDE (DD)	(ELEVFT)	(ELEVFT)	(ELEVFT)	(ELEVFT)	(ELEVFT)	RISER_HT-A	RISER_HT-B	RISER_HT-C
MW-12	3759544.05	403349.18	33.9719957	-118.0462302	221.22	221.23	220.87			-0.36		<u></u> _

Professional's Name: Armando D. Dupont

Professional's License Type: Professional Land Surveyor

Professional's License Number: 7780

NOTE:

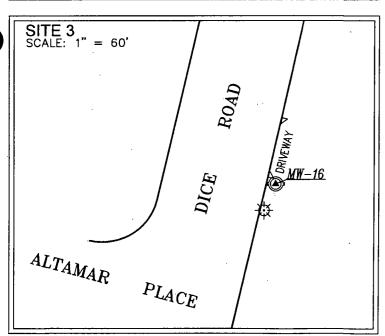
RISER_HT - RISER HEIGHT

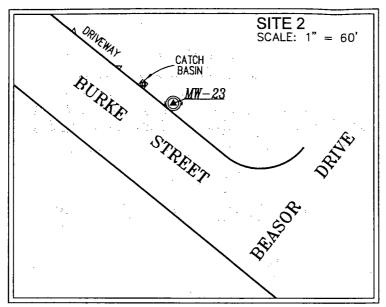
RISER HEIGHT: THE MEASURED DISTANCE FROM GROUND SURFACE TO TOP OF WELL CASING

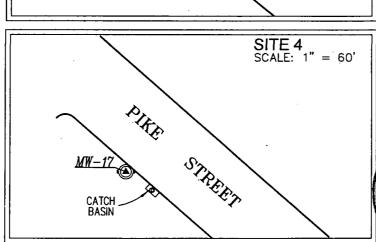
DD: DECIMAL DEGREES
TOR: TOP OF RIM
TOC: TOP OF CASING

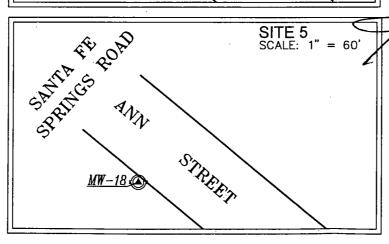
NG: NATURAL GROUND
FS: FINISH SURFACE

	MONITORING WELLS										
WELL	NORTH	EAST	I ATITUDE (DD)	LONGITUDE (DD)	TOR	FS/NG	TOC-A	TOC-B	TOC-C	TOC-D	
WELL	(UTM-11 METERS)	(UTM-11 METERS)	EATITODE (DD)	LONGITODE (DD)	(ELEVFT)	(ELEVFT)	(ELEVFT)	(ELEVFT)	(ELEVFT)	(ELEVFT)	
MW-16	3757951.13	401492.78	33.9574593	-118.0661432	153.47	153.50	153.19	153.26			
MW-17	3757463.42	401264.18	33.9530399	-118.0685620	159.40	159.42	159.03	158.90	159.00		
MW-18	3757631.05	402590.55	33.9546753	-118.0542282	144.32	144.74	143.73	143.83			
MW-23	3758349.18	402203.78	33.9611151	-118.0584936	149.35	149.35		149.06	149.07	148.04	





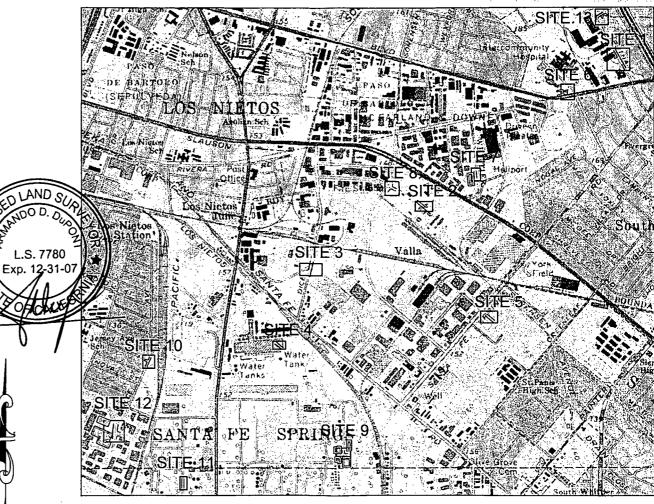




Site Vicinity Map - NIS

SITE PLAN **MONITORING WELL LOCATIONS**

SANTA FE SPRINGS, CA 90670



COORDINATES

THE COORDINATES SHOWN HEREON ARE BASED UPON THE UTM COORDINATE SYSTEM (NADB3), ZONE 11, METER, BASED UPON STATIC GPS OBSERVATION, HOLDING

BENCH MARK

THE ELEVATIONS SHOWN HEREON ARE BASED UPON NGS POINT NO. DY0238, ELEVATION = 118.58 FEET (NAVD88)

DATES OF SURVEY

AUGUST 5, 2005 JUNE 14, 2006

SCALE 1" = 60Legend

MONITORING WELL LIGHT STANDARD TOP OF RIM TOP OF CASING

CONCRETE

STORM DRAIN MANHOLE

PREPARED FOR

ARCADIS - Los Angeles

1400 N. HARBOR BOULEVARD, SUITE 700 FULLERTON, CA 92835 (714) 278-0992 (714) 278-0051 Fax

MW-13

MW-16

DATE OF SURVEY: AUGUST 5, 2005

NORTH

3759304.28

3757951.13

MW-17 3757463.42 401264.18

MW-18 3757631.05 402590.55 MW-23 3758349.18 402203.78

(UTM-11 METERS) (UTM-11 METERS

EAST

403429.28

401492.78

_					
			· · · · · · · · · · · · · · · · · · ·		
L		DATE	REVISION	BY	
		08/10/05	SUBMITTAL	MN	CAL VADA
	1	06/16/06	ADD WELLS	MN	LAND SURVETING • CIVIL ENGINEERIN
	2	06/26/06	ADD MW-12	MN	411 JENKS CIR., SUITE 205, CORO
	3	08/09/06	CLIENT'S COMMENTS	MN	Phone:951.280.9960 Fax:951.280.9 www.calvada.com
	4	08/16/06	CLIENT'S COMMENTS	MN	WWW.compagn.com
	4	08/23/06	CLIENT'S COMMENTS	MN	DATE: AUGUST 23, 2006

LATITUDE (DD)

33.9574593

33.9530399 33.9546753

33.9611151

33.9690200

MONITORING WELLS

LONGITUDE (DD)

-118.0453368

-118.0661432

-118.0685620

-118.0542282

-118.0584936

-118.0447767

TOR

(ELEV.-FT)

153.47

159.40

144.32

149.35

CAL VADA

TOC-A TOC-B

(ELEV.-FT) (ELEV.-FT)

153.19

143.74 143.73 143.83

158.90

149.06 149.07

206.02

153.19

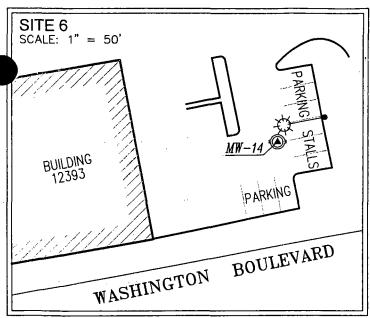
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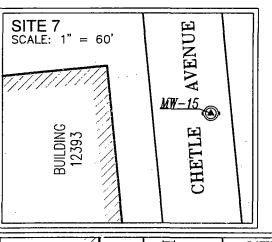
LAND SURVEYING . CIVIL ENGINEERING . ENVIRONMENTAL SERVICES 411 JENKS CIR., SUITE 205, CORONA, CA. 92880 Phone:951.280.9960 Fax:951.280.9746 TOLL:800-CALVADA JOB NO. 0558

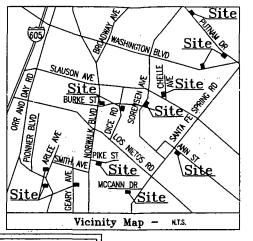
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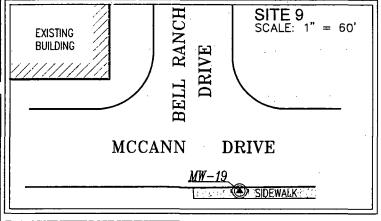
SHEET 1 OF 2

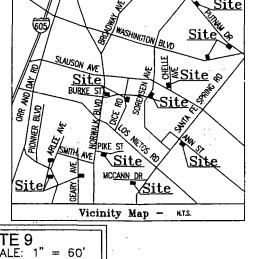
TOC-C TOC-D

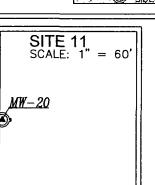


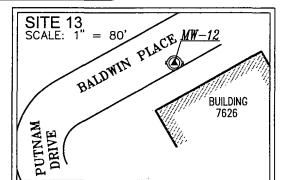










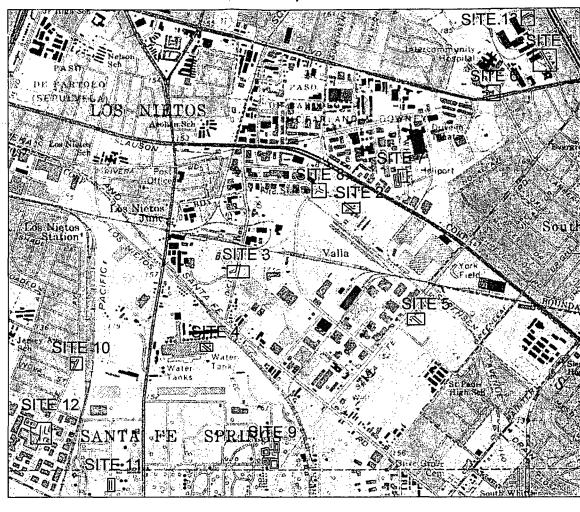


SCALE 1" = 60'

SITE 12 SCALE: 1" = 80' BOULEVARD HAMDEN PLACE PIONEER BUILDING 9929

SITE PLAN MONITORING WELL LOCATIONS

SANTA FE SPRINGS, CA 90670



AVENUE

AVENUE

GEARY

SITE 10 SCALE: 1" = 60'

MW-22

SITE 8 SCALE: 1"

= 60'

THE ELEVATIONS SHOWN HEREON ARE BASED UPON NGS POINT NO. DY0238, ELEVATION = 118.58 FEET (NAVD88)

DATES OF SURVEY AUGUST 5, 2005

JUNE 24, 2006

Legend MONITORING WELL LIGHT STANDARD TOP OF RIM TOP OF CASING STORM DRAIN MANHOLE CONCRETE

DATE OF SURVEY: JUNE 14, 2006

				MO	NITORIN	G WELLS						
WELL	NORTH	EAST	LATITUDE (DD)	LONGITUDE (DD)	TOR	FS/NG	TOC-A	TOC-B	TOC-C			
WEEL	(UTM-11 METERS)	(UTM-11 METERS)	CATITODE (DD)	LONGITODE (DD)	(ELEVFT)	(ELEVFT)	(ELEV -FT)	(ELEV -FT)	(ELEVFT)	RISER_HT-A	RISER_HT-B	RISER_HT-C
MW-13	3759304.29	403429.28	33.9698410	-118.0453368	206.34	206.30	206.01	205.87		-0.29	-0.43	
MW-14	3759053.87	403113.19	33.9675538	-118.0487301	172.97	172.98	172.63			-0.35		
MW-15	3758539.73	402532.68	33.9628639	-118.0549556	148.65	148.57	148.28			-0.29		
MW-19	3756760.85	401687.06	33.9467442	-118.0639072	159.01	158.94	158.73			-0.21		
MW-20	3756601.72	400670.84	33.9452137	-118.0748847	142.07	141.99	141.31	141.32	141.35	-0.68	-0.67	-0.64
MW-21	3756893.99	400223.26	33.9478069	-118.0797607	129.27	128.91	128.81			-0.10		
MW-22	3757381.90	400466.19	33.9522296	-118.0771876	151.47	151.36	150.82			-0.54		
EW-1	3758460.37	402022.79	33.9621008	-118.0604647	152.27	152.43	152.11			-0.32		
MW-08A	3758460.73	402024.99	33,9621043	-118.0604409	152.59	152.62	152.34			-0.28		
MW-08B	3758457.80	402028.55	33.9620782	-118.0604021	152.50	152.54	152.20			-0.34		
MW-08C	3758457.80	402028.55	33.9620782	-118.0604021	152.50	152.54	152.23			-0,31		
MW-08D	3758462.12	402021.54	33.9621165	-118.0604785	152.27	152.43	152.11			-0.32		

DATE OF SURVEY: JUNE 24, 2006

	MONITORING WELLS											
WELL	NORTH	EAST	LATITUDE (DD)	LONGITUDE (DD)	TOR	FS/NG	TOC-A	TOC-B	TOC-C		·	
WELL	(UTM-11 METERS)	(UTM-11 METERS)	LATITODE (DD)			(ELEVFT)	(ELEVFT)	(ELEVFT)	(ELEVFT)	RISER_HT-A	RISER_HT-B	RISER_HT-C
MW-12	3759544.05	403349.18	33.9719957	-118.0462302	221.22	221.23	220.87			-0.36		

PREPARED FOR

ARCADIS - Los Angeles

1400 N. HARBOR BOULEVARD, SUITE 700 FULLERTON, CA 92835 (714) 278-0992 (714) 278-0051 Fox

	BY	REVISION	DATE	
<u>Cf</u>	MN	SUBMITTAL	08/10/05	
	MN	ADD WELLS	06/16/06	1
	MN	ADD MW-12	06/26/06	2
	MN	CLIENT'S COMMENTS	08/09/06	3
	MN	CLIENT'S COMMENTS	08/16/06	4
DA	MN	CLIENT'S COMMENTS	08/23/06	4

AL VADA LAND SURVEYING . CIVIL ENGINEERING . ENVIRONMENTAL SERVICES 411 JENKS CIR., SUITE 205, CORONA, CA. 92880 Phone:951.280.9960 Fax:951.280.9746 TOLL:800-CALVADA JOB NO.

SHEET 2 OF 2 MN DATE: AUGUST 23, 2006

COORDINATES

TERRADELL

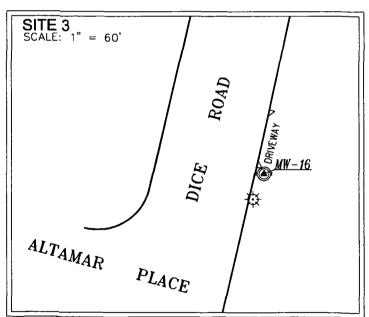
STREET

AVENUE

 BU_{RKE}

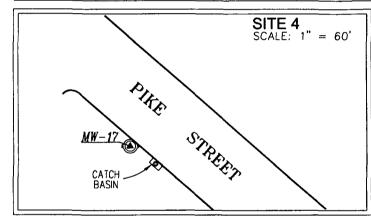
STREET

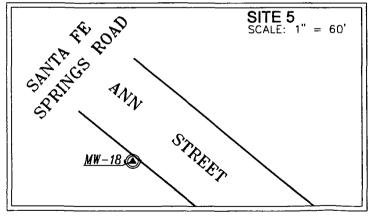
SORENSEN



SITE 2 SCALE: 1" = 60' CATCH BASIN BURKE MW-23 STREET

30,650





COORDINATES BENCH MARK

THE COORDINATES SHOWN HEREON ARE BASED UPON THE UTM COORDINATE SYSTEM (NADB3), ZONE 11, METER, BASED UPON STATIC GPS OBSERVATION, HOLDING NGS POINT NO. DY023B.

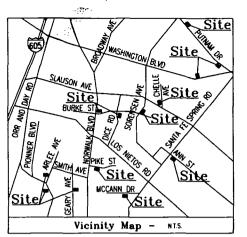
THE ELEVATIONS SHOWN HEREON ARE BASED UPON NGS POINT NO. DYO238, ELEVATION = 118.58 FEET (NAVDBB)

DATES OF SURVEY

AUGUST 5, 2005 JUNE 14, 2006

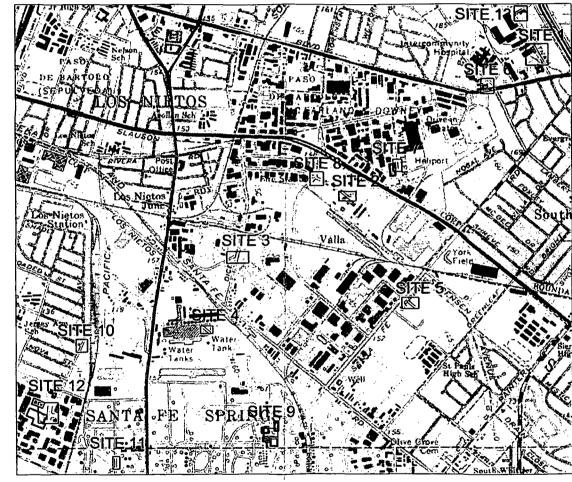
Legend MONITORING WELL LIGHT STANDARD TOP OF RIM TOP OF CASING STORM DRAIN MANHOLE CONCRETE

SCALE 1" = 60



SITE PLAN **MONITORING WELL LOCATIONS**

SANTA FE SPRINGS, CA 90670



DATE OF SURVEY: AUGUST 5, 2005

			MC	NITORING WELL	.s				
WELL	NORTH	EAST	LATITUDE (DD)	LONGITUDE (DD)	TOR	TOC-A	TOC-B	TOC-C	TOC-D
WELL	(UTM-11 METERS)	(UTM-11 METERS)	EXTITODE (DD)	LONGITUDE (DD)	(ELEVFT)	(ELEVFT)	(ELEVFT)	(ELEVFT)	(ELEVFT)
MW-13	3759304.28	403429.28	33.9698410	-118.0453368	206.33	206.02	205.88		
MW-16	3757951.13	401492.78	33,9574593	-118.0661432	153.47	153.19	153.19	153.26	
MW-17	3757463.42	401264.18	33.9530399	-118.0685620	159.40	159.03	158.90	159.00	
MW-18	3757631.05	402590.55	33.9546753	-118.0542282	144.32	143.74	143.73	143.83	
MW-23	3758349.18	402203.78	33.9611151	-118.0584936	149.35		149.06	149.07	148.04
OW-8B	3759212.72	403480.10	33.9690200	-118.0447767	201.43	200.81			

PREPARED FOR

ARCADIS - Los Angeles

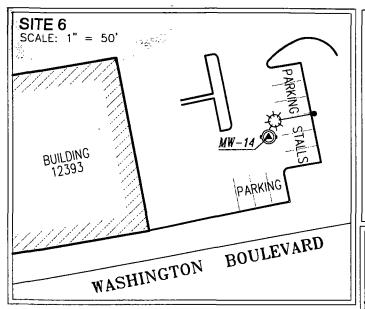
1400 N. HARBOR BOULEVARD, SUITE 700 FULLERTON, CA 92835 (714) 278-0992 (714) 278-0051 Fax

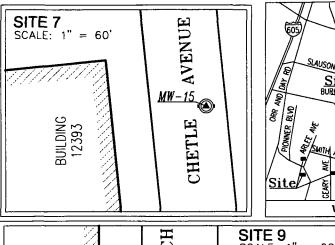
		• –		
	DATE	REVISION	BY	_
	08/10/05	SUBMITTAL	MN	
1	06/16/06	ADD WELLS	MN	
2	06/26/06	ADD MW-12	MN	
3	08/09/06	CLIENT'S COMMENTS	MN	
4	08/16/06	CLIENT'S COMMENTS	MN	
	1			_

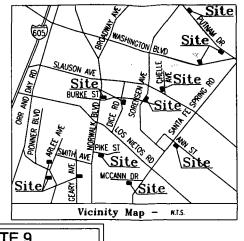
CAL VADA

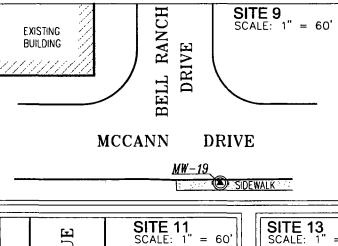
LAND SURVETING - CIVIL (HIGHERAND - CIVILORIA CHRISTINI SERVICES
411 JENKS CIR., SUITE 205, CORONA, CA. 92880
412 JENKS CIR., SUITE 205, CORONA, TOLL SERVICES Phone:951.280.9960 Fax:951.280.9746 TOLL:800-CALVADA JOB NO. 05584

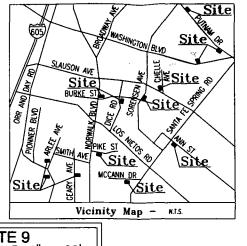
DATE: AUGUST 16, 2006 SHEET 1 OF 2

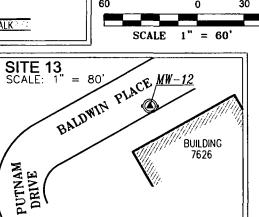








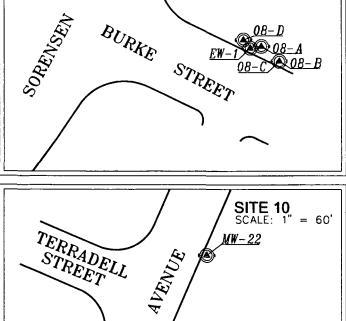


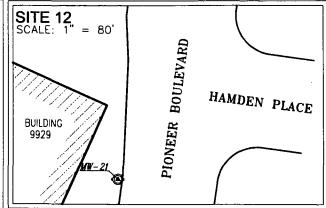


SITE PLAN

MONITORING WELL LOCATIONS

SANTA FE SPRINGS, CA 90670





MW - 20

DATE OF SURVEY: JUNE 14, 2006

					NITORIN			mac n	7000	1	г	
WELL	NORTH	EAST	LATITUDE (DD)	LONGITUDE (DD)	TOR	FS/NG	TOC-A	TOC-B	TOC-C	1		l
l	(UTM-11 METERS)	(UTM-11 METERS)			(ELEVFT)	(ELEV.+F1)	(ELEVFT)	(ELEVFT)	(ELEVFT)	RISER_HT-A	RISER_HT-B	RISER_HT-C
MW-13	3759304.29	403429.28	33.9698410	-118.0453368	206.34	206.30	206.01	205.87		-0.29	-0.43	
MW-14	3759053.87	403113.19	33.9675538	-118.0487301	172.97	172.98	172.63			-0.35		-
MW-15	3758539.73	402532.68	33.9628639	-118.0549556	148.65	148.57	148.28			-0.29		
MW-19	3756760.85	401687.06	33.9467442	-118.0639072	159.01	158.94	158.73			-0.21		·
MW-20	3756601.72	400670.84	33.9452137	-118.0748847	142.07	141.99	141.31	141.32	141.35	-0.68	-0.67	-0.64
MW-21	3756893.99	400223.26	33.9478069	-118.0797607	129.27	128.91	128.81			-0.10		
MW-22	3757381.90	400466.19	33.9522296	-118.0771876	151.47	151.36	150.82			-0.54		
EW-1	3758460.37	402022.79	33.9621008	-118.0604647	152.27	152.43	152.11			-0.32		
MW-08A	3758460.73	402024.99	33.9621043	-118.0604409	152.59	152.62	152.34			-0.28	I	
MW-08B	3758457.80	402028.55	33.9620782	-118.0604021	152.50	152.54	152.20			-0.34		
MW-08C	3758457.80	402028.55	33.9620782	-118.0604021	152.50	152.54	152.23			-0.31		
MW-08D	3758462.12	402021.54	33.9621165	-118.0604785	152.27	152.43	152.11			-0.32		1

DATE OF SURVEY: JUNE 24, 2006

ł	MONITORING WELLS													
	WELL	NORTH	EAST	LATITUDE (DD)	LONGITUDE (DD)	TOR	FS/NG	TOC-A	TOC-B	TOC-C				7
	WELL	(UTM-11 METERS)	(UTM-11 METERS)	LATITUDE (DD)	LONGITUDE (DD)	(ELEVFT)		(ELEV,-FT)	(ELEVFT)	(ELEVFT)	RISER_HT-A	RISER_HT-B	RISER_HT-	·C
ı٢	MW-12	3759544.05	403349.18	33.9719957	-118.0462302	220.53	221.23	220.87			-0.36			
_														

COORDINATES

THE COORDINATES SHOWN HEREON ARE BASED UPON THE UTM COORDINATE SYSTEM (NADB3), ZONE 11, METER, BASED UPON STATIC GPS OBSERVATION, HOLDING NGS POINT NO. DY0238.

ARLEE

4 VENUE

 BU_{RKE}

BENCH MARK

SITE 8 SCALE: 1" = 60'

THE ELEVATIONS SHOWN HEREON ARE BASED UPON NGS POINT NO. DYO23B, ELEVATION = 118.58 FEET (NAVD88)

DATES OF SURVEY

AUGUST 5, 2005 JUNE 24, 2006

AVENUE

GEARY

Legend MONITORING WELL LIGHT STANDARD TOP OF RIM TOP OF CASING 0 STORM DRAIN MANHOLE

CONCRETE

PREPARED FOR ARCADIS - Los Angeles

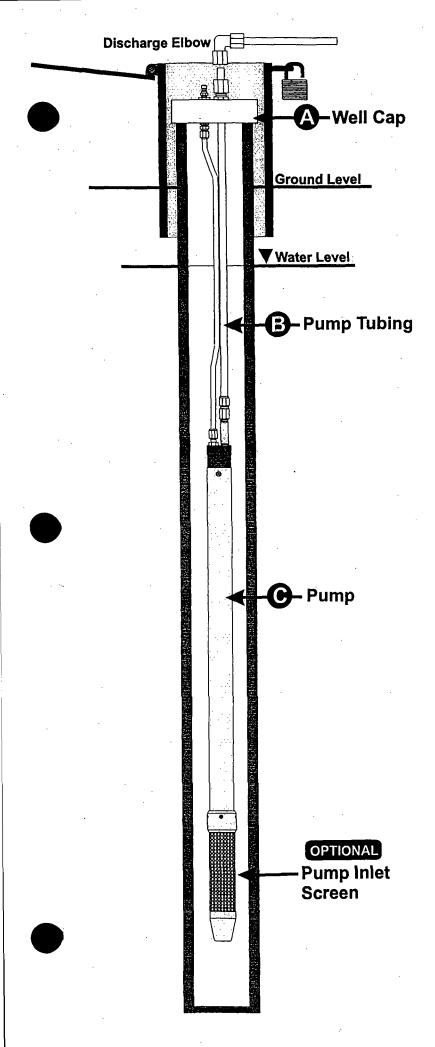
1400 N. HARBOR BOULEVARD, SUITE 700 FULLERTON, CA 92835 (714) 278-0992 (714) 278-0051 Fax

1	DATE	REVISION	BY	CAL VADA
	08/10/05	SUBMITTAL	MN	CITE VIIIVII
1	06/19/06	ADD WELLS	MN	LAND SURVEYING • CIVIL CHIGHNEAMIG • CHVIRCHMENTAL SCRVICES
2	06/26/06	ADD MW-12	MN	411 JENKS CIR., SUITE 205, CORONA, CA. 92880 Phone:951.280.9960 Fax:951,280.9746 TOLL:800-CALVADA
3	08/09/06	CLIENT'S COMMENTS	MN	www.calvada.com JOB NO. 05584
4	08/16/06	CLIENT'S COMMENTS	MN	DATE: AUGUST 16, 2006 SHEET 2 OF 2

SHEET 2 OF 2

Appendix G

Dedicated Pump Placement



WELL WIZARD®

Dedicated Monitoring Systems

WELL SYSTEM "A"

BLADDER PUMP ONLY

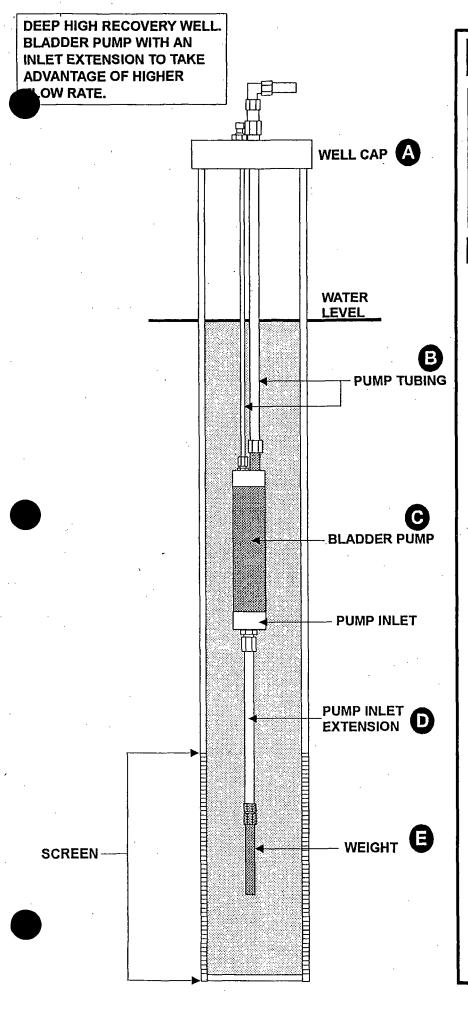
CheckList

- Well Cap
- Bladder Pump Tubing
- **9** Bladder Pump

Options:

Pump Inlet Screen Flex-Flo Discharge Adapter

PEV #3 3-3-00



WELL WIZARD

WELL SYSTEM:

TVDE

BLADDER PUMP WITH AN INLET EXTENSION

CHECKLIST

- A. WELL CAP
- **B. PUMP TUBING**
- C. BLADDER PUMP
- D. PUMP INLET EXTENSION TUBING
- E. WEIGHT

P/N 2054 REV. #2 2-24-95

Rev Date:

7/5/2006

Customer: Arcadis

Site/Location: Omega Chemical OU-2 Project # CA000646.0001

Date: Sept 12, 2005

Salesperson: DLC / GL

Well ID No.	MW12	MW13B	MW14	MW15	MW16A	MW16B
Well System Type	Α	Α	Α	Α	Α	Α
Well Diameter (Inches)	2	2	2	2	2	2
Well Depth	102	138	80	75	65	121
Static Water Level	82.9	81.85	46.2	25.75	48.03	48.9
Water Column Height	19.1	56.15	33.8	49.25	16.97	72.1
Top of Screen	82	123	60	50	45	106
Bottom of Screen	97	133	75	70	60	116
Sample Collection Point (ft-btoc)	96	128	74.0	69	59	111
Cap Model	C26S	C26S	C26S	C26S	C26S	C26S
Elbow/Flex Flow Model	37740	37740	37740	37740	37740	37740
Tubing Stick-up Above Cap (included in total tube length)	0	0	0	0	0	0
Bladder Pump Model	T1200M	T1200M	T1200M	T1200M	T1200M	T1200M
Bladder Pump Inlet Screen	35200	35200	35200	35200	35200	35200
Pump Submergence	13.10	46.15	27.80	43.25	10.97	62.10
Bladder PumpTubing Model	PT5000	PT5000	PT5000	PT5000	PT5000	PT5000
Bladder Pump Tubing Length	92.5	124.5	70.5	65.5	55.5	107.5
Drop Tube Kit Drop Tubing Model Drop Tubing Length Drop Tube Inlet Screen Addt'l Drop Tube Weight Model Total QTY Drop Tube Weights						
Single system purge volume (ml)	1329	1633	1120	1072	977	1471

	APPROVAL: Signature:	
o	Date:	

Rev Date:

7/5/2006

Customer: Arcadis

Site/Location: Omega Chemical OU-2 Project # CA000646.0001

Date: Sept 12, 2005

Salesperson: DLC / GL

Well ID No.	MW16C	MW17B	MW17C	MW18A	MW18B	MW18C
Well System Type	L	Α	L	Α	Α	L
Well Diameter (Inches)	2	2	2	2	2	2
Well Depth	169	109	187	76	105	166
Static Water Level	50.78	65.95	73.24	27.93	27.88	29.58
Water Column Height	118.22	43.05	113.76	48.07	77.12	136.42
Top of Screen	149	94	172	56	90	146
Bottom of Screen	164	104	182	71	100	161
Sample Collection Point (ft-btoc)	156	99	177	70	95	154
Cap Model	C26S	C26S	C26S	C26S	C26S	C26S
Elbow/Flex Flow Model	37740	37740	37740	37740	37740	37740
Tubing Stick-up Above Cap (included in total tube length)	0	0	0	0	0	0
Bladder Pump Model	T1200M	T1200M	T1200M	T1200M	T1200M	T1200M
Bladder Pump Inlet Screen		35200		35200	35200	
Pump Submergence	30.00	33.05	30.00	42.07	67.12	30.00
Bladder PumpTubing Model	PT5000	PT5000	PT5000	PT5000	PT5000	PT5000
Bladder Pump Tubing Length	80.8	95.5	103.2	66.5	91.5	59.6
Drop Tube Kit	37757		37757			37757
Drop Tubing Model	35374		35374	·		35374
Drop Tubing Length	69.72		68.26			88.92
Drop Tube Inlet Screen	38850		38850			38850
Addt'l Drop Tube Weight Model						
Total QTY Drop Tube Weights	1		1			1
Single system purge volume (ml)	1918	1357	2117	1082	1319	1899

APPROVAL: Signature:			
Date: _	·	 	·

Rev Date:

7/5/2006

Customer: Arcadis

Site/Location: Omega Chemical OU-2 Project # CA000646.0001

Date: Sept 12, 2005

Salesperson: DLC / GL

Well ID No.	MW20A	MW20B	MW20C	MW21	MW22	MW23B
Well System Type	Α	Α	L	Α	Α	Α
Well Diameter (Inches)	2	2	2	2	2	2
Well Depth	95	137	195	84	94	102
Static Water Level	67.28	67.55	76	49.78	61.8	29.5
Water Column Height	27.72	69.45	119	34.22	32.2	72.5
Top of Screen	75	122	180	64	74	87
Bottom of Screen	90	132	190	79	89	97
Sample Collection Point (ft-btoc)	89.0	128	185	78.0	88.0	92
Cap Model	C26S	C26S	C26S	C26S	C26S	C26S
Elbow/Flex Flow Model	37740	37740	37740	37740	37740	37740
Tubing Stick-up Above Cap (included in total tube length)	0	0	0	0	0	0
Bladder Pump Model	T1200M	T1200M	T1200M	T1200M	T1200M	T1200M
Bladder Pump Inlet Screen	35200	35200		35200	35200	35200
Pump Submergence	21.72	60.45	30.00	28.22	26.20	62.50
Bladder PumpTubing Model	PT5000	PT5000	PT5000	PT5000	PT5000	PT5000
Bladder Pump Tubing Length	85.5	124.5	106.0	74.5	84.5	88.5
Drop Tube Kit			37757			
Drop Tubing Model			35374			
Drop Tubing Length			73.5		 -	
Drop Tube Inlet Screen			36630			
Addt'l Drop Tube Weight Model						
Total QTY Drop Tube Weights			1			
Single system purge volume (ml)	1262	1633	2193	1158	1253	1291

APPROVAL: Signature:	 	 		
Date:	 		·	

Rev Date: 7/5/2006

Customer: Arcadis

Site/Location: Omega Chemical OU-2 Project # CA000646.0001

Date: Sept 12, 2005

Salesperson: DLC / GL

Well ID No.	MW23C	MW23D				
Well System Type	L	L			<u></u>	
Well Diameter (Inches)	2	2				
Well Depth	165	190				
Static Water Level	32.35	33.15		-		
Water Column Height	132.65	156.85				
Top of Screen	145	175				
Bottom of Screen	160	185				
Bollom of Screen	100	100				
Sample Collection Point (ft-btoc)	159	182		· ·		
Cap Model	C26S	C26S				
Elbow/Flex Flow Model	37740	37740				
Tubing Stick-up Above Cap (included in total tube length)	0	0				
Bladder Pump Model	T1200M	T1200M				
Bladder Pump Inlet Screen						
Pump Submergence	30.00	30.00	<u> </u>			
	075000	DTSOO				
Bladder PumpTubing Model	PT5000	PT5000				
Bladder Pump Tubing Length	62.4	63.2				
Drop Tube Kit	37757	37757				
Drop Tubing Model	35374	35374				
Drop Tubing Modes Drop Tubing Length	91.15	111.35				
Drop Tube Inlet Screen	36630	36630				
Addt'l Drop Tube Weight Model	30030	35415				
Total QTY Drop Tube Weights	1	2				
Total QTT Drop Tube Weights	ı	4				
Single system purge volume (ml)	1946	2184				

	APPROVAL: Signature:	
:s\2006 quo	Date:	

Appendix H

Well Purge Logs and Sample ID Logs

A ARCADIS

g:\common\FORMS\LOWFLO

1:03

Project Name	Oneya	Chen	·								D# MW		
Project Numb	er <u>CROC</u>	00646	<u>0,000 (</u>	<u>.0001</u> 4					1	Date_ / _	6/06		
Screened Inte		•				Casing	Туре:	PVC) s	t. Steel	Other _.		
Peristaltic pur	mp tubing	inlet de	epth	96'						Diamete	r (inches) _	2	
Static Water I	_evel 	2.97	<u>'</u>	Allon	14bl: 0)rowdown;)= 3.25 &+			Volum	es Purge	ed		
Time	Minutes Elapsed	DTW	Rate (gpm)(ML)	Volume	pН	Cond. (mS/cm) (umhos/cm)	ORP (mV)	DO (%)	DO (mg/l)	TEMP.	REMARKS		
9:53		82.97	280	290							Com	puts	0 9
4:56		33.86	280								12 R	Vill	_]
9:59	6	8995	280								3 D	rsche	عمم
19:02	9	1S.33	280								\$0° p.5	s.'] &
p:05	12	25.78	200								Slow	100 m	Ilm
10:08	15	26.10	105										7
10-11	18	16.20	100										
10.14	21	26.37	100										
12:17		8.57											
19:17		86.76	10		7.04	: 289		19.8	1.65	23.93			
10:26		26.87	80		7.07	1.282		19.9		23.19			7
10:29		898	80		7.96	1. 286		20.7		29.37			7
10:32		87.09	80		7.05	1.285		21.4		24.49			
11:17		8867			1-7	7.002		Ť		7			7
MPZO DA	ta					1.791		20.6					┥
10:28					7.07	1.291		20.6	1.37	23.90			7
10:73	_				701	1.287		20.4		24,27			7
10:38					707		<u>.</u>	22.0		24.59			7
10:43					7.04			<u> </u>		25-09			┪
(0:48			1		705	1. 292		19.3		25.63		·····	7
10:53					705					4.34			┪
10:58			L	<u></u>	7.05	1.305		17.1	1.5-	27.19			
10.55 URG	ING EQU	IIPMEN	T	1	7SAL	IPUISC FQUIPN	/ENT	19.2		261	TEST KIT	S	7
10:55 N:0					7.01	PUMP		19.0	D- 4 1-4	Zebri	tration (mg	/L) Tim	e
	CENTRI	-UGAL F	PUMP	1	1.06	TEFCON BAILE	R	11.0	DO				
	SUBMER				-	SS BAILER			FE 2+	1			-
- X	VACUUN DEDICA					DISPOS. BAILE DDL SAMPLER		-	H ₂ S			<u> </u>	
	OTHER	_		ĺ		OTHER (SPECI] ,					
REMARKS/CO	MMENTS	3.25	all.	weble	dra	wdown.	Pī	N 9	0.56	9 11:4	lan.		_
		max	drai	vdour.	7,5	3 > allow	od. H	ad re	duce	.) Dloc	1 to 80	me/m	h.
		Reco	mna	ne) Po	(SS)	e sample	1/nc					• • •	_
COMPLETED E	\sim	n H	alper	~ /V	han	+		REVIEW	ED BY_	For	1/1		
SIGNATURE_					_			DATE_					



Project Name Project Numb Field Personr						:)		0# 13B 7/6/06		.
Screened Inte						Casin	g Type:	PVC		t. Steel	Other		
Peristaltic pur	mp tubing	inlet de	epth	125	<u>``</u>					Diameter	(inches) <u>2</u>		-
Static Water I	_evel	80.6	\$	Allou 25%	128-	ne.wdoin i 123) = 1.25	} +		Volum	es Purge	d		-
Time	Minutes Elapsed	DTW	Rate (gpm)(ML)	Volume	pH	Cond. (mS/cm) (umhos/cm	ORP	DO (%)	DO (mg/l)	TEMP.	REMARKS]
2:02	05	80.6				, , , , , , , , , , , , , , , , , , , ,			<u> </u>		ID 10Z] .
2:07	Ś										•]
2:08	6_	80,68			ļ) (0		20.0		700			
2:11	9		600		6.94	1,68	65	37.3	3.17	22.8			
2:12	10	80.69			 		<u> </u>	_	ļ				-
2113	11	(4 0 00)			600	170	64	2227	100	2269			-
2116	17	30.7		·	6.93	1.70	109	77.1	1200	10 10			1
2122	- ` ' -	80.68-	60.80		40	1,70	58	316	2.72	2261			1
2:25			80.80		6.97	171	60				@ 14:26		1
2:28			-80.80		- Pr. III	- 1, 11	"	1	P. 101	27.00			1
2131		12.50			6.99	1.72	28	25.1	2.12	23,11	NTU 120	-	Stale
													Stably list of the state of the
		Max	drawd	our=	0.15	It - acc	Mal	le.		:			4000
					-	0	<u> </u>	<u> </u>	ļ	ļ			- was
	ļ 				-		<u> </u>	<u> </u>		<u> </u>			ł
					 		<u> </u>	ļ		<u>.</u>	··· · · · · · · · · · · · · · · · · ·		-
							 		<u> </u>				
15:24					 		 	 			Sinish 1 S		
15,21										<u> </u>	0 10 KJ . 2	my car	5.
PURG	ING EQL	IIPMEN	IT	<u> </u>	SAN	APLING EQUIP	MENT	1		FIFI	D TEST KITS		- 1
^	2" BLAD					PUMP		1	Test		entration (mg/L)	Time	1
	CENTRI					TEFLON BAILE	ER	1	DO				
	SUBMER				-	SS BAILER DISPOS. BAIL		-	FE ²⁺ H ₂ S			 	-
a	DEDICA					DDL SAMPLER	₹	1				+	1
	OTHER	(SPECIF	Y)		N.	OTHER (SPEC	IFY):]]
REMARKS/CO	MMENTS Opsi	<u>(</u> m	put	5/D.		Richa	ge	10.5		וציול	haya 4.	5 j	Jour 600
COMPLETED	3Ý	y H			_		•						- ?
SIGNATURE								DATE					



g:\common\FORMS\PURGE LOG - LOWFLOW

Project Nam Project Num	e Ome	926	ham	resc	2V~ 2	2				WELLI	0# PMW/ 7/7/06	4
Project Num	ber CA	000	646	0001					[Date	7/7/06	
Field Person		.									77	
Screened In	terval	60-	75	TD.	-80	Casing	з Туре:	PVC) s	t. Steel	Other	
Pumping inle	et depth	74	,	Topel	pr	np				Diamete	r (inches)2	-
Static Water	Level	46.1	<u> </u>	Top of Screen	to pu	1984 x 0.	25 = 3 3	. 5	Volum	es Purge	r (inches) 2	
Time	Minutes Elapsed	1 5	Rate (gpm)(ML)	- Volunio	рН	Cond. (mS/cm)(umhos/cm)	0.11	DO (%)	DO (mg/l)	TEMP (°F (°C)	REMARKS	
08:41	0	46.15								1		
B'55		46.19	-									
8:57		46. iv	_ ()	640W	N/V	u						
9:00		4/12-	4620	640ml/n	10 6	1.56	43	238	2.01	23,0	37.1 MU	
9:03				GYOW!		1:56			j.			
9:05	1	1	351-	1 3 3 3 4		,						
9:06		WL 12-	4620	CVA INT	. 6-	11.56	42	18	1.52	1202	33.2 ~	
9:08	<u> </u>	- CAIC		le to my	X-52-70			, ,	1,7-	<i>5</i> -7.0 · ·	77.6	
7:09	†···	1.12	16.20	640 m/n	\	-						
9:10		Dit.	10.00	I W (U V-/)		1.56	40	11 8	1 40	13 0/	37.1 NTO	
	 	11 10	46,20	640 m/m		1, 04	7.0	16.19	1.70	23.07	71-1 210	
9:12	1	710.12-	75.00	10 m		10	2 0	166	/ 14/	22 46	196	
9:14	1	16 10	46.00	640	6.79	1160	27	13.4	1.27	13.04	38.6 NEC	<u> </u>
9:15		161/6	-46.00	010							Staviliza	
	<u> </u>	 	May	Danie	14. a`	46,20-46	(A) 2	2 22	04.7	7 -	26	
	 	 	Vaca V	1200	0001	16120-16	1	VICX	Jr. 3	3.2.	D/C	
	<u> </u>	 	 -		 				<u> </u>			
<u> </u>		 		 				 				
	<u> </u>		-									
	 								<u> </u>		<u> </u>	
	<u></u>	<u> </u>	<u> </u>	L	l			<u>L</u>			<u> </u>	
PUR	GING EQL	JIPMEN	Т]	SAN	IPLING EQUIP	MENT]		FIEL	D TEST KITS	
	2" BLAD					PUMP			Test	Conc	entration (mg/L)	Ţ
	CENTRI			-		TEFLON BAILE	R	1	FE 2+			+
	SUBMER PERISTA			†		SS BAILER DISPOS. BAILE	R	}	H ₂ S			+-
N.	DEDICA]		DDL SAMPLER		j	<u> </u>			\dagger
	OTHER	(SPECIF	Y)]	•	OTHER (SPEC	FY):]				
REMARKS/CO	OMMENTS	Pum	pla	raneter	ار ا <u>-</u> حا	10# 101	Di	scha	3 41	SR	kehase 11	<u>), 3</u>
					<u></u>		<u> </u>	DCA!	640m	11/m.n	. / -	
COMPLETED	BY					<u>.</u>		REVIEW	ED BY	(in		> -
									<i>f</i> =		10 /	
SIGNATURE_					-			DATE_				



0-2-PMW15-0-17 Low Flow Groundwater Sampling Form Project Name OMEGA Chamica L Project Number 646.01.14 WELL ID# MW-15 Date 7-10-08 Field Personnel V. Jak 72 Screened Interval 50-70 Casing Type: PVC St. Steel Other Peristallic pump tubing inlet depth 69' Diameter (inches) mex drawdow = 19'x 0,25 ≈ \$\$ 4.5 Volumes Purged_ Static Water Level 24.38 Volume Minutes Rate Cond. ORP TEMP. REMARKS Elapsed (gpm)(ML) Purged (mS/cm) (umhos/cm) (mV) 0913 24.38 1,102 1,43 21,90 6.85 09 15 0979 6.80 24.39-2452 48 14,7 1,26 21.88 1.62 4.41-29.59 1720 6,79 21.39-2459/220) 62 14.0 1.22 21.89 6.82 24,59-24,38 =0,21< 4,5h -OK **PURGING EQUIPMENT** SAMPLING EQUIPMENT FIELD TEST KITS 2" BLADDER PUMP PUMP Time Test Concentration (mg/L) CENTRIFUGAL PUMP TEFLON BAILER SUBMERSIBLE PUMP SS BAILER FE 2 DISPOS. BAILER VACUUM TRUCK H₂S DEDICATED PUMP DDL SAMPLER OTHER (SPECIFY): OTHER (SPECIFY) REMARKS/COMMENTS N2 TANK PI=2,000 ni PP=1850 MP105 Etting = 4 ThroThe P=50 TD=163 CPM = 4

DATE

COMPLETED BY

SIGNATURE___



Project Name Project Numb Field Person	<u> </u>	1EGA	1 Ch	EMICA	, _					WELL I	D# <u>MW-/</u> 7-11-0	6A_
Project Numi	per <u>(/-(/</u>	1000000	12,00	LC					L	Date	1-11-0	€
Screened Int		_				Casins	Tuno	640) .	t Staal	Othor	
				- /		Casing	Type:	A VC		t. Steel	Other _	
Peristaltic pu	mp tubing	inlet de	pth	59:			4 .			Diamete	(inches)	2
Static Water	Level 4	3.70	7	Max 0.	allou 25 ×	valle draw (59-45.7)	» D. C	79 ls	Volum	es Purge	d	
Time	Minutes	DTW	Rate	Volume	рН	Cond.	ORP	DO	DO	ТЕМР.	REMARKS	
0.75	Elapsed	4 07.	(gpm)(ML)	Purged		(mS/cm) (umhos/cm)	(mV)	(%)	(mg/l)	(°F / °C)		
8:30	0	15.76	400								12/01/5	
Stop 8:59		912 97-540	200		697	3.70	38	401	3.4z	<i>2</i> 2.35	70/1101	- druw dom
9:07	1-1	14-51.0 11-54.03	200		V.1 F	3.70	70	101	7.12	22.75		
9:05	1	1-51.06	200		6.95	3.7.r	39	32.6	Z. 81	21.66		
7:08	\\ / - \ -	-54.06	700	_	6.93		39			21.63		
2:11	12) 540		200		6.96	3.10	38	30.6	2.63			
		7 - //		· · · · · · · · · · · · · · · · · · ·				20.02				
9:04					6.95	3.71	39	33.8	2.92	21.65		
9:09	1				6.94	3.71	39	30.6		21.63		
									2.66			
			,									
	Max	Dra	whos	1: 5	4.06	- 45.70=	8,36	>2.	0984	- No	/	
									0	acce	. 1 .	
	<u> </u>											

	<u> </u>	<u> </u>					<u> </u>					
DUD(SING EQU	IIDMENI	- 1		C S A M	IPLING EQUIPI	MENIT	1	· · · · · · · · · · · · · · · · · · ·	EIEI	D TEST KITS	<u> </u>
FUNC	2" BLAD					PUMP	VILINI	l	Test		entration (mg/l	
	CENTRI					TEFLON BAILE	R		DO	Conc	entration (mg/t	-) (11116
	SUBME					SS BAILER			FE 2+	-		
~	VACUUN			_		DISPOS. BAILE			H₂S	-		
~	DEDICA OTHER				<u> </u>	OTHER (SPEC						
	1 0111211	<u>وء ,ی</u> ۱ سد	0		l	0						
REMARKS/CC) ¬	796	< \ L	- 200	- 121	1= = 1,0	50/5	- 0	^	Lin	$\rho = \frac{\rho}{\rho}$	120,05
1 leading	= 3003	, ,	- Fe).05ec	1/100		D sec	TI		\$ lannete	<u> </u>
Drofping	How + K	Poren	n mer	W belo	<u>ש</u> סגונס	Sambly	دمت الما المت	Sul	ince	, 010	+ In well	s Stebiliza.
COMPLETED	R. , , , , ,		ripoor	2100	-	_ /	<i>y</i> 1	KUVIEW	FD BY	1	mil	19//
SIGNATURE								DATE		-		



10:00

Project Name Project Numb Field Personr	. <mark>Omega (</mark> per <u>(146.C</u> nel <u>V. S</u> 2	Chenia 11.19	cal	BIS/IV	y ban	w·			Ţ	WELL II Date	0# MW-168 7/11/06
Screened Inte	erval <u> 00</u>	6 - 11	6			Casing	Type:	PVC	S	t. Steel	Other
Peristaltic pur	mp tubing	inlet de	pth	<i>'</i>						Diameter	(inches)
Static Water I	Level_ <i>5</i>	4.87		Max	Iraw.	loan allower 5 x (111-10) Cond.	j. G. i	15'	Volum	es Purge	d
Time			Rate	Volume	<u>رويكل</u> pH	Cond.	ORP	DO -	DO	TEMP.	REMARKS
ti. Ca	Elapsed	 	(gpm)(ML)	Purged		(mS/cm) (umhos/cm)	(mV)_	(%)	(mg/I)	(°F / °C)	
9152	1	54.83						<u> </u>			
7:55	· · · · · · · · ·		7 460					 			:
9:55 9:58 10:01	6 54				7 0.2	167	<u>u2</u>	700	227	71.6.2	
10.01		- 54-8			7.25	·				21.62	
10:04		bh.	760		7.24	1.57				21.60	
18:87	15	<u> </u>		,	7.22	1.58				21.62	
10:10	18	<u> </u>			7.16	1.58				21.65	
10:06	<u>B</u>				7.24	1.28	42	35.1	3.06	21.28	
					<u> </u>						
										_	
		İ									
	Max	k do	a Was	m=	54.	89-54.8-) =0	02	41	1.25	et ok
								0			
				J.		1 1 1		_			
		 									
<u> </u>	<u> </u>							<u> </u>			
		-									
		<u> </u>							-	-	
L		L			L			l			J
DUBC	ING EQU	IDMEN	т 1		SAN	IPLING EQUIPA	AENIT	I		CICI	D TEST KITS
- FURG					3AN		/I EIN I				D TEST KITS
· · · · · · · · · · · · · · · · · · ·	2" BLADI CENTRIF				ļ	PUMP TEFLON BAILE	D		Test	Conce	entration (mg/L) Time
	SUBMER					SS BAILER			FE 2+		
	VACUUM				<u> </u>	DISPOS. BAILE	R		H ₂ S		
V	DEDICAT	TED PUI	MP	6		DDL SAMPLER					
	OTHER (SPECIF	Y) .		L	OTHER (SPECI	FY):				
REMARKS/CO	$\frac{\text{MMENTS}}{\approx (.0)_a}$	Tank) = 2 Ref	1,000psi	Pe ?	= 1900 pj	250	See	ID	= 103	one P= 1200:
11-011001	- 0×P	بد				·	 _	-) - (τ-		
COMPLETED E	BY							REVIEW	ED BY_	Ren	w///
CIONATURE										/	- 107
SIGNATURE_					-			DATE_			



10:21

Project Nam	ne Omera (Chemi	حامح							WELL	ID# ###18C	MW-16
Project Num	nber <u>616.0</u>	.14							ı	Date	10# <u>##48C</u> 	
Project Num Field Person	nnel V Jala	zor/	B-Sling	oara								
Screened In			V			Casing	ј Туре:	PVC	s	t. Steel	Other	
Peristaltic p	ump tubing i	inlet de	epth	561						Diamete	r (inches)2)
Static Wate	r Level <u>48</u> ,	88 '		Max	Allow	el drawdo	;	n c ll.±	Volum	es Purge	ed	
Time	Minutes Elapsed	DTW	Rate (gpm)(ML)	Volume Purged	PH	Cond. (mS/cm) (umhos/cm)	1	DO (%)	DO (mg/l)	TEMP.	REMARKS	
10:46		48.88'				(()	(/	(3.)			
10:49			7 720								1	
10.52			7 73	•	7.17	1.79	22	7.5	0.65	21.45		
10:55	9 Sta		, , ,			· · · · · · · · · · · · · · · · · · ·		1	"			
	1 1	_										
						(
10:57					7.19	1.69	49	4.4	0.38	21.76		
11:02	Ma	7.0	2	. -	d	ı	readil				o times	
11:07	1 We	70	- Did	not	2701	e and	A COCHUI	301	100	DC TU	1 Jimes	
	Max	٠١ ~	iw do	1	119.0	7-48.88=	0.19	21,	75 (1.010	1	
	1 / 1			<u></u>	17.5	7 10.00	<u> </u>	 	1/	1 0/5		
	-											
				<u> </u>							1	
												
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					_						1	
-											 	
						L	<u> </u>			<u>. </u>	.L	
PUR	RGING EQUI	PMEN	Т		SAN	IPLING EQUIPI	MENT]		FIEL	D TEST KITS	
	2" BLADD	ER PU	MP			PUMP		1	Test	Conc	entration (mg/L)	Time
	CENTRIF	UGAL F	PUMP			TEFLON BAILE	R		DO			
	SUBMER				<u> </u>	SS BAILER			FE 2+			
	VACUUM DEDICAT				ļ	DISPOS. BAILE DDL SAMPLER			H₂S	-		
<u> </u>	OTHER (S				x	OTHER (SPECI				 	-	
REMARKS/C	· -			1900 ps). sec			5.05	lin,	e P=	(20ps.	мЧ
											. ,	
COMPLETED) RY							REVIEW	FD BY		w/fl	
		_			-						191	
SIGNATURE			-		-			DATE_				



Project Name Project Numb Field Person	e Omega per <i>616. Q</i>	Chem. 1.14	cal						[WELL I	0# <u>NW-17A</u> 107	
Field Personal Screened Inte			_			Casino	ј Туре:	PVC			Other	·
Peristaltic pu					vmi		ј туре:	PVC			r (inches)	
Static Water											ed	
Time	Minutes Elapsed	DTW	Rate (gpm)(ML)	Volume Purged	pН	Cond. (mS/cm) (umhos/cm)	ORP (mV)	DO (%)	DO (mg/l)	TEMP. (°F / °C)	REMARKS	
11:50		75.28										
11:55		75.00 24.87										
13:58		74.7 4.57										
16:20		68.45										
Collecte	ed Vi	OC:	70X	NI NI	DMA	(\$6, Anous	fer (holica	c lua	s clea		
		I du	had mpi	alout	1	or topre	dinen dof	f wi Eth	xed u	ith o NOI	us Amber	<u> </u>
										<u> </u>		
PURC	SING EQU	JIPMEN	Т	•••	SAN	MPLING EQUIP	MENT	1		FIEL	D TEST KITS	
	2" BLAD CENTRI SUBMER VACUUM DEDICA	FUGAL F RSIBLE F M TRUCK	PUMP PUMP		~	PUMP TEFLON BAILE SS BAILER DISPOS. BAILE DDL SAMPLER	R		Test DO FE 2+ H ₂ S	Conc	entration (mg/L)	Time
REMARKS/CO	OTHER	(SPECIF	Y) bail		(OC)	OTHER (SPECI	FY):	ding 1	rafer.	(80)	85 59/100 0	ne vell w/u
	7				1							
SIGNATURE_			······································		_		1	REVIEW DATE	FD BA	Jan	198	
 common\FOR:		LO						_				-



11°C 0:00

Project Name Project Numb Field Person	per <u>CvA</u> nel <u>V、S</u>	000 e	zn /1	1.14 Bill 87	in ba	w.			I	Date	10# MW-17 7/12/00	6
Screened Int					J		Туре:	PVC	s (s	t. Steel	Other	
Peristaltic pu	mp tubing	inlet de	epth	991						Diamete	r (inches)こ	
Static Water	Level <u>(3</u>	-52		Mux	Allow	JDD- (99-94)=	1.25	l+	Volum	nes Purge	ed	
Time	Minutes Elapsed	DTW	Rate (gpm)(ML)	Volume Purged	pН	Cond. (mS/cm) (umhos/cm)	ORP (mV)	DO (%)	DO (mg/l)	TEMP.	REMARKS	
12'16		63.52		1 diged	 	(mozem) (umnoszem)	(1110)	(76)	(1191)	(1.7.0)		
			2 500		 			 	\vdash	 		
12:19		1-63.63			 			-	 	 -	<u> </u>	
12:25	9 675	-63.62	500					 	 	 		
16,69	()	-112.60 -126			├──				 			
	37	ble	500		ļ					 	<u> </u>	
<u></u>	<u> </u>	<u> </u>			<u> </u>				<u> </u>	 		
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	 						_				<u> </u>	
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<u> </u>	1.		ļ ļ									
	No	1x D	rawd	m:	63.6	2-63.52	>0.10	< 1.	25	OK		
	<u> </u>											
				-								
									<u> </u>			
			1	····				-		<u> </u>		
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			<u> </u>					<u> </u>				
PURC	SING EQU	IPMEN	 1		SAN	IPLING EQUIPA	1ENT	1		FIFI	D TEST KITS	
	2" BLADI					PUMP			Test		entration (mg/L)	Ti
	CENTRIF				—	TEFLON BAILE	R		DO	Conc	chitation (mg/c)	+''
	SUBMER					SS BAILER			FE ²⁺		······································	t
	VACUUN					DISPOS. BAILE]	H ₂ S			
X	DEDICA			\leftarrow		DDL SAMPLER						
	OTHER (SPECIF	Y)		<u>「×</u>	OTHER (SPECI	FY):			<u> </u>		
BEMARKS/CO	MMENTS	Tank	P_=	100 85	L,	==1,000				Li	ne P= 12	Sp5
Mostle	= 60	 ρ. i	e	.c. = 1	0.0	D';> >	50		e In	- 103	· CPM	4
	<u>-</u>			.		 ,				7	/ ////	
COMPLETED	BY				_			REVIEW	ED BY_	Kan	of After	
								DATE				



Project Name Project Number	e <u> </u>	ega 1960 Sala	Cher 0646	6.01 C)14 lika e	ban.			[WELL I	D# <u>MW - 17</u> 7/12/06	
Screened Int					۳۰ ر		туре:	PVC	s	t. Steel	Other	
Peristaltic pu	ımp tubing	inlet de	epth	177						Diamete	r (inches)	
Static Water	Level 7	2.80	•	Max	allo	ciable DD: (177-172)=1.	25	Volum	es Purge	ed	
Time	Minutes	DTW	Rate	Volume	pH	Cond.	ORP	DO	DO	(REMARKS	
13:10	Elapsed		(gpm)(ML)		-	(mS/cm) (umhos/cm)	(mV)	(%)	(mg/l)	(°F / °C)		
13:10	0	7290		7								
	3		298 70							<u> </u>		
13:16			99 120		-	ļ					 	
13:19		81 - 7 2.	77 720									
)	ubl-										
ļ	 -		<u> </u>		-							
	ļ											
	 											
	ļ					<i>i</i>			·			
		Mo	XD	sawde	burn	= 72.99-7	2:20	=0.7	951.	25 St	0K	
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				-								
	†	 				-	_					
	+											
	+				 					<u> </u>		
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	.}		L		<u></u>	<u> </u>	L			<u></u> _	<u> </u>	
יםו ום	GING EQU	IDMEN	i T		CAN	MPLING EQUIPM	MENIT] [EIEI	D TEST KITS	
	2" BLADI					PUMP	VIL. IN 1		To -4			Time
ļ	CENTRI					TEFLON BAILE	R		Test	Conc	entration (mg/L)	Time
	SUBMER					SS BAILER			FE 2+			
	VACUUN					DISPOS. BAILE	R		H₂S			
X	DEDICA-			$ \leftarrow $		DDL SAMPLER						
L	OTHER (SPECIF	<u>Y)</u>	L	<u> </u>	OTHER (SPECI	FY):	i l	1.0			
REMARKS/CO	OMMENTS	Tanle	PE=	1,000	9 0	E 300 psi	60	- 20	Line	-10-	120 psi	
1000110	<u>-1-10</u>	71 b21-		M-	1.0	XC ME	-W.V	70	<u> </u>	<u>- 1U.S</u>	(1//17	
			·			· ·						
COMPLETED	BY				_		1	REVIEW	EĎ BY_	Can	1/1//	_&_
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Project Nam Project Num Field Persor	nnel <u>V.Sa</u>	92a1								ſ	WELL I Date <u></u>	D# <u>OCZ-PM</u> 10 06	₩IBC-I	<u>-</u> MW-18A -
Screened In	terval	56	<u>, - 7</u>	<u> </u>		C	Casing	у Туре:	PVC) s	t. Steel	Other		
Peristaltic po							_				Diamete	(inches) Z		_
Static Water	Level_ <u>Z</u>	6.83	3′	Max	Allow	rabli 0 70-56) = U	3,5SH		Volum	es Purge	ed		_
Time	Minutes Elapsed		Rate (gpm)(ML)	Volume	pН	Cond (mS/cm) (uml		ORP	DO (%)	DO (mg/l)	TEMP.	REMARKS	-	
15:307	(0)	26.63			7.12	2,3	(0		34, 2		21,27			_
15:40					7.08			37			21.32			
15:43	(6) 2	6 69-16	70 (640) 5		7.08			35	30,2		21.19			7
15: 40			6640		140.0	<u> </u>		_ر_ر_	- 72/3	2103	2101			┪
15:49		61.26		_	7.68	2.3	7	37	219	270	7/ 1) &			┪
1901 ((11) 2	, 01. 20,-	-	/ 	1,700	<u> </u>		J. J.)	2410	X1 /< 0		····	-
		┪		 	 	!								_
		Mix	250	1	- 21	76	21	(0	010	10	- 1.	6/0		-
		Jola V	1019	wood	1-04	9 · 16 -	عالم	163=	0.13	73	3	0/		4
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DITO	GING EQI	IIDMEN		1	SAAS	IPLING EC	ים וו ור	MENIT	1		בובי	D TEST KITS		7
- FUR					3AIV		ZUIF1	A1 []		Test			1 -	_
		DER PU IFUGAL I		ļ	<u> </u>	PUMP TEFLON I	BAIL E	D		Test DO	Conc	entration (mg/L)	Time	=
		RSIBLE		1		SS BAILE		.13	-	FE 2+			+	-
-		M TRUC		1		DISPOS.		R	1	H ₂ S				-
×		ATED PU		4		DDL SAM]			<u> </u>		
L	OTHER	(SPECIF	Y)] L	1	OTHER (S	SPEC	FY):	j					
REMARKS/CO	OMMENTS	Tank	Pr=	2500; 100	P 2	400 . = S.	<u>0</u>	Line	Pre:	SIne 3	-120 CPN	14 14		<u> </u>
COMPLETED	BY	••	<u> </u>						REVIEW	ED BY	Ta	m/H		<u> </u>
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ow Flo	ow Gr	ound	dwate	er Sam	pling	g Form					'	18A-0-
roject Name	e_ <i>O</i> /	negi	4 Ch	BMCCA	el o	U2			r	WELL I	D# <u>MW</u>	(84B)
eld Personi	nel <u> / -</u>	Sala	24-	/b.s	ling b	an.				Jale	-70-0	<u> </u>
creened Inte							ј Туре:	PVC) s	t. Steel	Other _	
eristaltic pu										Diameter	(inches) _	
atic Water	Level <u>み</u>	6.6	0	Mai	(A11 50,2	bwed DD - 5 (95-9	0)=1	1.25'	Volum	es Purge	d	
Time	Minutes Elapsed	DTW	Rate (gpm)(ML)	Volume Purged	рН	Cond. (mS/cm) (umhos/cm)	ORP	DO (%)	DO (mg/l)	- TEMP. (°F / °C)	REMARKS	
4:52	Ø	26.60			7,03		274	 		2134		
1:5 <i>5</i> (3)	46.59-26	<i>7</i> 0		7.07	_	22			71.19		
1:58	6)26.59	-26.73	560		707	2,20	13	25.2	2,20	3183		
	9)259-	+	560		<u> </u>							
	2) 26.59-				207	2,21	22	2.59	219	21,29		
) 26.60-2	6.73	560		Ĺ						_	
10 (18	<u> </u>	<u> </u>										
		<u> </u>			<u> </u>							
	.	<u> </u>				,						
	Max	dsa	wood	m =	26.72	1-26.60	-0./	(<	1,25	PA	ok.	
	,										-	
	<u> </u>	<u> </u>										
		<u> </u>										
						_						
		I										
PURC	SING EQL	JIPMEN	iT	1	SAM	IPLING EQUIPI	MENT]]		FIEL	D TEST KIT	s
	2" BLAD	DER PU	MP			PUMP			Test	Conc	entration (mg/	/L) Time
	CENTRI					TEFLON BAILE	R		DO			
	SUBMER					SS BAILER			FE 2+			
	VACUUN DEDICA			,	ļ	DISPOS. BAILE DDL SAMPLER			H₂S		<u> </u>	
	OTHER			9	A	OTHER (SPECI						
MARKSICO				M → D			•		Det (S)	1 . 121		
MARKS/CO	= 50ps	TALIF	80 R	wps1,18	9.0	Discharge			CF	120 MY		105
······································										1	·/	1
MPLETED I	BY							REVIEW	ED BY_	Ken	rff	

DATE_



Project Name Project Numb Field Personr Screened Inte	nel <u>V/</u>	VCE,	<u>/B.1</u>	<u>. C</u> _		Quein	. .	(aug			D#_MW-19 10(06				
				154		Casin	Type:	PVC		t. Steel	Other	_			
Peristaltic pur			. ——					1		Diamete	(inches)	<u> </u>			
Static Water I	Level_ <u>28</u>	.49		Max	Alle	swall (:	Srow - o	of 1	Volum	es Purge	d				
Time	Minutes	DTW	Rate	Volume	pH	Cond.	ORP	DO	DO	TEMP	REMARKS				
11.15	Elapsed	791.0	(gpm)(ML)	Purged	h n	(mS/cm) (umhos/cm)	 	(%)	(mg/l)	(°F / °C)					
16:12		28.49			7.0	0.864	35	32.1	7	2154					
16:15	3) 28.8				732	0.802	24	5.1		21.10					
	6) 18.86				7.44		15	1.7	7.5	21.113					
16:21		-29.06			7,33	0.767	24		037						
16:23	12)288	29.08	800		7.42	0.730	19	311	D17)	21.08					
					 -		<u> </u>			-					
	<u> </u>	10. 0				0 - 5 0	D. /.	<u> </u>							
<u> </u>		ma	x or	LWdon	0,49 =	<u>+ 0,5</u>	952	J1-	OK						
max drawdon = 29.08-28.49=0.59<2 ft 0x															
	<u> </u>						-	 							
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	L				l		<u>!</u>	l		L					
PURG	ING EQU	IPMEN	T		SAN	PLING EQUIP	MENT]		FIEL	D TEST KITS				
ļ	2" BLADE					PUMP		1	Test	,	entration (mg/L				
	CENTRIF	UGAL F	PUMP			TEFLON BAILE	R	İ	DO						
	SUBMER					SS BAILER			FE 2+						
	VACUUM DEDICAT			\leftarrow		DISPOS. BAILE DDL SAMPLER			H₂S	-					
	OTHER (<	OTHER (SPEC						\rightarrow			
REMARKS/CO	MMENTS (Jank	P==2	300pi,	PF=										
											. 1 /				
COMPLETED E	3Y				_			REVIEW	ED BY	Kar		<u> </u>			
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A ARCADIS

	Low Flo	ow Gr	ound	dwate	er Sam	pling	g Form				/		
	Project Name Project Numb Field Person	per 646 C	1714		o Blum		·			[WELL I	D# <u>Mu</u> 7-12	119
			- 4		<u> </u>					\			
	Screened Inte	erval <u>5</u> (0-41					g Type:	PVC	,	t. Steel	Other	
مام	Peristaltic pu	mp tubing	inlet de	epth	30	NO	Punp	- San	pli f	Pro	Diamete	r (inches) _	Z
alos A	Static Water			1	44.	e 11	oved = 0.	2014 =	25	, /			
10	Static Water	Level(§	7.00		. <u>Man</u>		0.	<u> </u>	-5-3/	/4 Vol um	es Purge	ed	
	Time	Minutes		Rate	Volume	рН	Cond.	ORP	DO	DO	TEMP.	REMARKS	
	4:53	Elapsed ©	ļ	(gpm)(ML)	Purged		(mS/cm) (umhos/cm) (mV)	(%)	(mg/l)	(°F / °C)		
		as ba	i od	dry.	~ 0.	25 0	1/4.01						
	10-15	1 vn	1433	7	ļ	13 7.	1100.7						
	10:17		74.25					 	-	 			
\mathbb{W}	10:20		74.)4										
'	10:25		74.04										
	Allo	red to	re	charge.		come		Zho	es	inch	to	reach	80%
	Rech	36 17	ale	0.30	feet p	er (minutes	<u> </u>	· · · · · ·				·
		ļ -	CALAII		ļ	ļ		<u> </u>					
	15:50	ļ	18.94					 				-	
			 			 		ļ				-	
		 		N.c.	V D)2	- 74	.38 - 69 =		0.4	2	Tr /		
	<u> </u>	 	-	70	X. D),)	= /4	.5-64=	>,5	\$1 ·	23	5_		
		_	<u> </u>			-		/					
		<u> </u>		Road	8mn	0 . /	Bai	00					
			<u> </u>	pesce			1000		•				
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			<u> </u>					<u> </u>					
		NIO FOI	UDAZEN	.	1		IDUNO FOUID	MATNET	ı		FIE	D TEOT (/I	
	PURC	SING EQU				SAN	PLING EQUIP	MENI		T4		D TEST KIT	
		CENTRI			1		TEFLON BAILE	R		Test DO	Conc	entration (mg	/L) Tim
		SUBME	RSIBLE I	PUMP]		SS BAILER			FE 2+			
		VACUUN DEDICA					DISPOS. BAILE DDL SAMPLER			H ₂ S	· 		
		OTHER					OTHER (SPEC						
	REMARKS/CO		Tark	PJ =	<u> </u>	pò	P==				Press	ure on (the = 128
	1 N= 49.	>	· 1 =	70 1 1	1							1	,
	rvova to	be a	d	611	2		angle.					11/	$\overline{}$
	COMPLETED	BY		<u>*</u>	GEOM	end	- rwrs ve	-	REVIEW	ED BY	and		<u> </u>
	SIGNATURE_								DATE				



Project Name Project Numb Field Person	e Omer G ber 646. U	Chem 01.14 1444 /	ica/ B_5/in	baren					ı	WELL I Date <u> </u>	0# <u>MW~20</u>	<u>A</u>	
Screened Int	erval 🚣	5-91	0'			Casing	Type:	PVC) s	t. Steel	Other _		
Peristaltic pu	ımp tubing	inlet de	epth	1'						Diameter	(inches)	<u>Z_</u>	
Static Water	Level <u>løk</u> .	79'		May	K Al	lowed D1 5 (89-7	د): : ح	25	Volum	es Purge	d		
Time	Minutes	DTW	Rate	Volume	pH	Cond.	ORP	DO	DO		REMARKS		
12:21	Elapsed	6.79	(gpm)(ML) 440	Purged	 	(mS/cm) (umhos/cm)	(mV <u>)</u>	(%)	(mg/l)	(°F / °C)			
11-24	1		6 440		-			 		 			
12:27	 	0 668			-			 		 			
17:30		0-66.9			6.77	1.50	44	319	3.25	22.47			
12:33	12 66.81				6.88		39			22.33			
12:36		2-16-91			6.90	1.51	41	37.5	3.21	22.28			
-		ble						1					
	1	7.2					40						
12:29					6.83	1.51	38.6	38.6	3.31	22.47			
12:34			*		6.70	1.51	42	36.4		22.42			
											<i>V</i> -		
						•							
										<u> </u>			
		Ma	× D	rawa	om	266.91-	66.7	7-0	. 12	84 (DK_		
	-				<u> </u>					<u> </u>			
										<u> </u>			
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			ij					ļi		<u> </u>			
PURG	SING EQU	IPMEN	т]		SAM	IPLING EQUIPM	/ENT	1		FIEL	D TEST KITS		\neg
	2" BLADI				 	PUMP		-	Test		entration (mg/L		Time
	CENTRIF					TEFLON BAILE	R	1	DO				
	SUBMER					SS BAILER]	FE 2+				
	VACUUM				_}	DISPOS. BAILE DDL SAMPLER		4	H₂S				
	OTHER (OTHER (SPECI						\dashv	
	-	$\overline{1,1}$, D _	1 800	D	- 1/00							
REMARKS/CO	DMMENTS	1(m)	D. ()	1,800	1F	= 1650	/ 0	<u></u>	100		D Q A A / 1		
INOTIL	-22	(1)	Keti	1 = 7.0	<i>)</i>	UINCHARSC =	6.0	<i></i>	= 10	١ (PM 4		
	D) (-					DEVIEW		T	-/1	1	
COMPLETED	R.A				_			REVIEW	=D BX	-m	11/1		<u></u>
SIGNATURE_			·	•	-			DATE_					



0 13:05

Project Name Project Numberson	e <u> 0 m/54 (</u> ber <u>[/1/, 0</u> / nel <u>V-5/4/0</u>	(henic 1.14 tas /1	s. Singa	arm_					[WELL I Date_ _ 7∫	p# <u>MW-20</u> 11/06	<u>B</u>
Screened Int			_			Casing	ј Туре:	PVC) s	t. Steel	Other	
Peristaltic pu	ımp tubing	inlet de	epth	28'						Diameter	(inches)	7
Static Water	Level 67	1.19			(6)	D Allow	ed)-10	- n ,	Volum	es Purge	d	
Time	Minutes Elapsed	DTW	Rate	Volume Purged	C 5 (128-122 Cond.			DO	TEMP. (°F / °C)	REMARKS	
13:01	1 2	67,7	(gpm)(ML)	ruiged		(mS/cm) (umhos/cm)	(mV)	(%)	(mg/l)	(770)		
13:04	ζ	6117			7.12	1,53	68	43.Z	360	23.66		
13:07			29 560		1 112		100	17.0	1.00	- 100	l	
13:10	9 4	6-67.2	7 1/10		7.06	1.54	68	26.1	2.24	27.20		
13:13	12 61.1	6-67.2	7 <i>560</i> 1 600		6.94	1,53	71	24.1		22.07		
13:16		6-67.2			7.06	1.52	69	24.0		ZZ.0Z		
		471										
13:09	<u> </u>				6.97	1.59	74	26.4	2.26	22.36		
13:814	1			-	7.01		74	24.1	206	72.06		
1-1-2-1						-,-,-		<u> </u>				
			Mal	COD	<u>-</u> -	6.79297	19 =					
						67.29-	(2)	- 0	<u> </u>	15	0/	
	-		<u></u>			7-	0/,1	1 - 0.1	0 \	11-3	0/0	
-	7											
	 			_								
										_	-	
	Ì										*	
	SING FOU	UDA 4ENI	· 1		CAL	ADLING FOLIDA	4ENT	1 1		FIE	D TEOT WITE	
PURC	SING EQU				SAIV	MPLING EQUIPM	VIEIN I		T		D TEST KITS	1 700
<u> </u>	2" BLADI					PUMP TEFLON BAILE	R		Test DO	Conce	entration (mg/L)	Time
	SUBMER					SS BAILER			FE 2+			
	VACUUM					DISPOS. BAILE			H₂S			
X	OTHER (DDL SAMPLER OTHER (SPECI			_			-
	tank	<u> </u>	1650	0	<u> </u>		·. <u>· · /·</u>	, ,				
REMARKS/CC		15=	<u>1450</u>	YF=	1,9	50			<u></u>	be =	120 psi	
Ilvotle_	60pz-	-	· Re	刊- (7.5	Doch	J =	4.5	IO:	107	CPMY	
												11//
COMPLETED	BY				_		1	REVIEW	ED BY/	10	1	11
SIGNATURE_					_			DATE_				



	Project Nam Project Num Field Person	e_ <i>0m</i> ber <i>[,4</i> inel V	199 6. 9	<u>Chem.</u> 01.14 a 2 a(/	B. Sling	bill m					Į	WELL I Date <u></u> ∭	106 106	
	Screened Int							Casing	гТуре:	PVC) s	t. Steel	Other	
	Peristaltic pu	ımp tul	oing	inlet de	pth	185						Diamete	r (inches)	·
	Static Water	Level_	78.	.59'		Max	Alloc	ued DD:	0,25	V.S.	Volum	es Purge	ed	
	Time	Minu		DTW	Rate (gpm)(ML)	Volume Purged	рН	Cond. (mS/cm) (umhos/cm)	ORP (mV)	DO (%)	DO (mg/l)	TEMP.	REMARKS	
	13:45	0		18.59	400									
	13:48	3			8.64/560	<u> </u>								
	13:51	10			86766		7.45	117.0	52	4.7	0.39	22.43		
	13:54	9			8.671560)			45	3.4		22.24		
	13:57	12	יי אב	(1.30	68 (720		746	0.780	38	7.6		22.03		
	11.00	10	70	71.77V	wo () w		1.10	0 · , · · ·	28_	1.0	0.50		···	
	13:00													
	13:56						7.48	0.783	39	3.2	0.28	27.03		
							<u> </u>					<u> </u>		
					Max	OD=	78.	68-78.59	= 6.0	9 <	1,25	St	6/	
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[PUŔ	GING I	EQU.	IPMEN	т		SAM	IPLING EQUIPN	MENT_]		FIEL	D TEST KITS	
I		2" B	LADE	ER PU	MP			PUMP]	Test	Conc	entration (mg/L)	Time
ļ				UGAL F				TEFLON BAILE	R] i	DO			
				SIBLE F				SS BAILER		1	FE 2+			+
ŀ				TRUCK			 	DISPOS. BAILE DDL SAMPLER			H₂S			+
ł				SPECIF			-	OTHER (SPECI		1	<u> </u>	-	·	+ -
				0		\cap				•	1	1, /	> 15	
	REMARKS/CO		ITS	127	1,450		= 1,2					the P		
	WOLK	S	oves.	<u> </u>	المراج	1 = (0.5	- Sec	Dischage	<u> 5.0</u>	50C	<u> </u>	<u> </u>	<u>CPMY</u>	
•	COMPLETED	RY BY	d	ICC/	-dvri)	g the		A PORT OF	P	REVIEW	- On	1 100	1111	collect
	SIGNATURE	ا ت					_			DATE				-
						••	-			· · ·				



Project Name Project Numb Field Personn Screened Inte	e Ones per 696 nel V- Sa	O1. 1 1 a Zer	ca/ 4 -/B.51	ing bac n					[WELL I	D# MW-Z1	
						Casing	Type:	PVC) s	t. Steel	Other	
Peristaltic pu	mp tubing	inlet de	epth 7	8				`		Diameter	(inches) 2	·
Static Water	Level <u>49</u>	.55		Ma	L di	= 0.25(-	18-64 5 S) -	Volum	es Purge	d	
Time	Minutes	DTW	Rate	Volume	pН	Cond.	ORP	DO	DO		REMARKS	
14:45	Elapsed O	49.55	(gpm)(ML)	Purged		(mS/cm) (umhos/cm)	(mV)	(%)	(mg/l)	(°F / °C)		
14:48	└		y 120					<u> </u>				
14:51		56-49.7										
14:54		Stry	73 760									
		tabl										
<u> </u>												
	-	-							-			
<u> </u>			11		· -	49,73-	49 c	× -			/	
			Max	DI	7	11113	11,2) - د	D. 18	-c		
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DUDE	יואוס בסיי	ווייייייייייייייייייייייייייייייייייייי	- 1	!	C ^ *	ADLING FOLUD	4CNT	1	 -	FIF	D TECT WITE	
PURG	3" BLADI				SAIV	PUMP	VIEIN I		Tost	,	D TEST KITS	T:
	CENTRIF					TEFLON BAILE	R		Test	Conc	entration (mg/L)	Time
	SUBMER					SS BAILER			FE 2+			
	VACUUM					DISPOS. BAILE			H₂S		· ·	
	DEDICAT					DDL SAMPLER OTHER (SPECI						+
L	,	- 1	$\overline{}$	2~		0		'				
REMARKS/CO	MMENTS	lan	C/I	<u>= 750</u>	آذم	/F -	600	PST		RELU	a ll sec	
				[h	no//C	e 60ps, 7	D 10	2/		D.2C	h YSRI	
						-					, , , , , , , , , , , , , , , , , , , 	
COMPLETED I	3Y				_		l	REVIEW	ED BY_	Kon	V / /	<u></u>
SIGNATURE								DATE			· • •	



Project Name Project Numb Field Person	e <u>0 ~</u> ber <i>646</i>	eyn Ch	emica						I	WELL I Date フル	D# NW-22 1/06	
Field Person	nei <u> </u>	Jazar/	B. Sling	barm								
Screened Int	erval _	74-8°	<u>7 ' </u>			Casing	туре:	PVC) s	t. Steel	Other	
Peristaltic pu	ımp tubii	ng inlet de	epth	38'						Diameter	(inches)	
Static Water	Level_	61.55	- <i>,</i>	Max	DD) Allower 25 (88-71 Cond.	· ()=	3)X	Volum	es Purge	d	
Time	Minute	es DTW	Rate (gpm)(ML)	Volume Purged	pН	Cond. (mS/cm) (umhos/cm)	ORP (mV)	DO (%)	DO (mg/l)	TEMP.	REMARKS	
15:02	Ø	61.55				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			(******			
15:05	3	6156-61	08 700		6.79	1.269	.45	57.1	5.04	ZO.90		
15.08	6	6157-61.			6.72	1,270	52	58.6	5.20	20.71		
15:11			b5 F00		6.72	1.26 Z	22	58.3	5.16	20.72		
,			,									
			ļ								,	
15.10	-		ļ		6.69	1.264	55	58.7	5.20	20.73		
	-									ļ		
		_										
	 	1	ļ			CL (- - - - - - - - - -				
	ļ	-	ax	Drai	ron	- 61.68	-61	77				
	ļ											
		+					9.4	(2	0 4	/		
	 					$= 0.3^{2}$	> /\{\}	(3	31	0,6		
	 		 									
										 		
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L	Ь				1					<u> </u>		
PURG	SING E	QUIPMEN	iT 1		SAM	IPLING EQUIPN	/ENT]		FIEL	D TEST KITS	
	2" BL/	ADDER PU	IMP .		<u> </u>	PUMP		1	Test	Conc	entration (mg/L)	Time
	CENT	RIFUGAL	PUMP			TEFLON BAILE	R]	DO			
		ERSIBLE				SS BAILER			FE 2+			1
~		UM TRUC		_		DISPOS. BAILE DDL SAMPLER			H₂S			
		R (SPECIF			~	OTHER (SPECI						1
		<i>A</i> 1	0 1	70-	Λ ì			•		1.	1) 12.5	
REMARKS/CC	MMENT	s lank	4271	100	اء ع	100		_		Linc	P = 1200	21
Throtley =	<u> 35 p</u>		Refil	> 10.0	Usec '	Disolarce	5	0 500		D= 10	3 CPM4	
	<u> </u>											
COMPLETED	BY							REVIEWI	ED BY /	\supset	n M	
SIGNATURE					_			DATE			- p	



Project Nam Project Num Field Person	ber C A of	646.	0001.	D0014	~				I	WELL I Date <u></u> 7/	D# MW-23B 7/06
Screened Int	erval <u>8</u>	7 -	97'			Casing	g Type:	PVC) s	t. Steel	Other
Peristaltic pu	ımp tubing	inlet de	epth	92'						Diameter	r (inches)
Static Water	Level_28	8.19	, r	1.	25 '	Allowalk	Dra	wdonn	Volum	nes Purge	ed
Time	Minutes	DTW	1 1	Volume	рН	Cond.	ORP	DO	DO		REMARKS
.11 44 :	Elapsed	MIG	(gpm)(ML)	Purged		(mS/cm) (umhos/cm)	(mV)_	(%)	(mg/l)	(°F/°C)	
11.47			440			!		 		OFFICE !	
11: 50			62 770		6,99	1.60	19	157	134	22.4	
11:53			61 440		617	1. 40	20	14 + 7	1.2.	<u> </u>	
11:56			62 440		7.05	1,65	19	19 4	1.69	12.14	
11.59	15 21.5			<u> </u>	1.07				1202		
12:06		- 284			6.99	1.70	34	17.(241	22.27	
12:09	25 285				7.05	1,76	32			19.23	
12:17	28 285			i e		17.0		0/-	J. (2)	1000	
12:14			7				_			1	Sabilized.
<u>, ,</u>	<u> </u>										
		Ma	200	CI (N) day a	1.28	(.67-28	19 =	0.48	<1.2	150	(
				or co upigo			 				
חוום.	GING EQU	IDMEN	i 		SAN	IPLING EQUIPI	MENIT	7		EICI	D TEST KITS
	2" BLADE				3/10	PUMP	VIE V	-	Test		entration (mg/L) Tir
	CENTRIF					TEFLON BAILE	:R	1	DO	Conc	emation (mg/L) TII
	SUBMER	RSIBLE	PUMP			SS BAILER]	FE 2+		
	VACUUM					DISPOS. BAILE		-	H₂S_		
	DEDICAT				\propto	DDL SAMPLER OTHER (SPECI		┨			
	. 	J. T		P_ = 16	د ۱۲۸			_ P		P - 1	20 psi
remarks/co MPIO SA		<u>1761</u>	H. P	= 371	1.30 K	1 = 95		charge			ID: 102
REFILL	70.	5	Anch	4.5	7	1-/62	76	wall	5	0	cm.4
COMPLETED		7						REVIEW	ED BY	10	w///
SIGNATURE								DATE	_	,	



Project Name Project Numb Field Person					C 3014				ſ	WELL I	_{D#} MW-2 7-7-06	<u>3€</u>
Screened Inte	erval	145-	160'		1	Casing	Type:	PVC) s	t. Steel	Other	
Peristaltic pu	mp tubing	g inlet de	epth	159						Diameter	(inches)	
Static Water					¥ 99	: (159-145)	(0.25		Volum	es Purge	d	
Time	Minutes	DTW	Rate	Volume	рН	Cond.	ORP	DO	DO	TEMP.	REMARKS	
13:59	Elapsed		(gpm)(ML)	Purged	7 44	(mS/cm) (umhos/cm)	(mV)	(%) 33	(mg/l)	(°F1°C) 2(.97		
14:02	7 71		18600		702	1.59	25	رد ا	UILT	21,77	<u> </u>	
14:05	6 31.				7.02	1.59	23	2 2	ø. 1a	11.97	Started MPZ	70
14:00			30600		7-0-0	- 1 2	<u> </u>	ه رسيم	7,2-1	146 0	71-21-24 116	<u> </u>
	1	-										
1460	•		••		7.01	1.56	17	2.4	0.21	3188		
				· <u></u>								
·	<u> </u>	 	, ,									
	ļ	 	m -	<u>/</u>	-	10:2m	200	1 1 -	- 0			
		┼	Dra	w do w	7	(31,30	- 30.	74)-	0.3	0 < 3	12 QK	
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PURC	SING EQU	JIPMEN	T		SAM	IPLING EQUIP	MENT]		FIEL	D TEST KITS	
	2" BLAD	DER PU	MP			PUMP		1	Test	Conc	entration (mg/L)	Time
		FUGAL F				TEFLON BAILE	R		DO 55.21			
<u> </u>		RSIBLE I				SS BAILER DISPOS. BAILE	R	1	FE ²⁺ H₂S			+
Z		TED PU		\leftarrow		DDL SAMPLER]	1120			
	OTHER	(SPECIF	Y)		Lg_	OTHER (SPECI	FY):	J,				
REMARKS/CO MPIOSI CPMZ		NJ.7	ANK 2	Pr z P= S	900pi	PFZ REFILL COAN SIM	= : \	5 hwst	Los Dos	ChAA	= 120 psi 70 = 3.5 I	<u>()</u> 2/00
COMPLETED I	BY LUNT	Man	1.(- (·	-	, ,	REVIEW	ED BY_	ren	NH	
SIGNATURE								DATE	./		• •	

LOWING					•	g i oiiii						
Project Name Project Numb Field Personn	Omenc	۔ ما	See 1							WELL	in# M/1-1 ?	, D
Project Numb	GA	00/v	6 000							2010 7	10# MW-23 HOG	
Project Numb	per <u>w jo</u>	VCL 7		1: 1	7				·	Date 1	746	
Field Personr	nel_V. X	A WAG	<u>70.5</u>	lety bear								
Screened Into	erval	17.	5-190	9		Casing	Type:	PVC	/		Other	
Peristaltic pu	mp tubing	inlet de	epth	182						Diamete	r (inches)	
		_			A							
Static Water	Level	2111	<u> </u>	Max	y ac	∪ dow = 7x0	1255	.75	Volum	es Purge	ed	
Time	Minutes	DTW	Rate	Volume	рН	Cond.	ORP	DO	DO	TEMP.	REMARKS	
	Elapsed		(gpm)(ML)	Purged		(mS/cm) (umhos/cm)		(%)	(mg/l)	(°F / °C)		
15:31	0	37.71	840						_			
15.34	3	3199-	Z1684		1							
14:11	12	1 91 . 2	It 840		 							
15:40	a :	00.27	9 840		עז. דר	1,76	9	102	11.0	23.19	<u> </u>	
15.42	11 2				(1]	7		19,5	1100	51111		
	7	11-321	D THO		7.10	1.76	- FI		1 (1)	7127		
15:45	12 3	111-11-1		 -	20	1.76	10			20,37		<u> </u>
15:49	19 7	41.154	140		1519	1.75	10	18-6	1+62	11.33		
	<u> </u>									<u>. </u>		
		<u> </u>										
		1	rac	V101~	-	32,20-	31.	70=	0,		JA OK	_
<u> </u>					<u> </u>							
	<u> </u>	1			<u> </u>							
	<u> </u>		 	<u> </u>	1	·				<u> </u>		
		+	-		1							
										<u> </u>		
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		<u> </u>			ļ							
	<u> </u>											
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										•		
	•	•	•							•	*	
PURC	SING EQL	JIPMEN	ΙΤ		SAN	APLING EQUIP	MENT]		FIEL	D TEST KITS	
	2" BLAD	DER PU	IMP			PUMP			Test	Conc	centration (mg/L)	Time
ļ	CENTRI	FUGAL	PUMP			TEFLON BAILE	R	ĺ	DO			
	SUBME	RSIBLE	PUMP			SS BAILER			FE 2+			
	VACUU					DISPOS. BAILE			H₂S			
	DEDICA				<u> </u>	DDL SAMPLER		1		 		
L	OTHER	(SPECIF	-Y)	l		OTHER (SPECI	FY):		L	<u> </u>		
DEMARKO	MANACHTO	71	ham	. P	NA P	= 200-	,		13.	o la	sure = 12	0
REMARKS/CO	MMENIS	tart	شكيم	<u> </u>	<u> </u>	= 800ps	<i>N</i> .	1		-~	100 CF	2 23/
THE KH	ingi:	Tho	He.K =	SUKI	Keh	111 10 SC	hist	large	5 xc	<u>. 10</u>	=103, C	ンイ
									_		2,/	
COMPLETED	BY							REVIEW	∖ FD BV →	KZ	in/III	
JOHN LLILD	<u></u>				_			· · · · · · · · · · · · · · · · · · ·	7			
SIGNATURE_					_			DATE_				



SUBJECT	Sande	(09
	Onesa	(hural)
JOB NO:		

DATE:
DATE:
106

SHEET

Sample log

7/6/06

OC2-00-W-2-OC2-PMW12-6-1

3xVOAs

2x1/f SVOCS

2x1/f SVOCS

2x1/f NDMB

2x1 f 14 Bother

3xVOM 123TCP

1xVOA TOC

1x250ml C/t6

1x125nl Cyands

1x 300ml TICN

1d 500ml metals,

in filter

BCZ -PMW13B-0-2

3x hom/ A06422 VOC S 123 TCP 3 i hom 1 40642L 1x uoul TO C 2xlt puhr SVOC 024051,024050 2 X 1 /4 Anha MAN 624636, 62463, 1x14 July 024115 14 Drome Percharate /Coto/ Anino /DDS 001384 00 2515 retal 500 ml poly 125 ml Poly Cyany 001337 500 ml Poh 45318

0 c2 - PMW 13B-1-3 (dup)

VOC, 3×40ml vos

123 TCP

TOC 1x nom!

SVOC 2x 1/4 souly

NDMA

1,4 Drosum 1x11+ sorba.

Crt6/cla/shim/TDS 1×250ml poly

Cyanide 1x125 ml poly

TK1 1x500 ml poly

metals 1x500ml poly

OC2- BMW BB-5-7



SUBJECT:	Omega Charical	
	Sand, les	
JOB NO:		

ВҮ:	DATE:	
CHKD:	DATE:	{
7/	6/04	

SHEET
/

PAGE

7/6/06	0c2-00-w-h-5	1x 40ml von	mr.
•	TB-01-06-06	- -	
09:15	oc2-00-W-2-7	3xhon/ wn	Field Blak
09:30	0 C2 - 00 - W - 4-8	12 40 m 1 VOA 	Freld Black.
	TB-01-06-66	1 to m)	

SAMPLE	DENTIFIC/	ATION LOG)					_
				Sampled	Sample	_		
Date	Time	Operable Unit	Well Location	Medium (Water or Soil)	Type ¹ (0 thru 6)	Sequential Sample No.	Remarks	
							ipment Blank	4
Sample Ty		rip Blank;		Duplicate; 2 - f MS/MSD;	rieid bialik, 6 - Regula		притент втанк	
7/4/06			10				Dunkteste	†
7/1/06		OC2		₩ N		10	DOMERCALE	4
<u> </u>			LUM 73C	ļ	 			_
							VOL 3440 ML + HCL	_
							123 TCP 3X40ML +HCL]
		•]		TOC IXHOME + HCL]
							SVOCS 2XIHE 00412	1/124119
					 	-	NOMA 2XIHE DAHIG	
					 			
 			<u> </u>	 			14 DIONANG IKIHE DI	*
—		ļ		-	ļ. ———		CYANIDE/NAON 000133	
			<u></u>				DESOLUED METAL	c01377
							Dissolved METAL	002 5 68
· I			1				TKN 351.3/H2504 - CC	15/4
1						-	320.97.12.09	1
7-10-1		OC 1	D:05.133	0-0-16	0	16	VOC 3×40 n + HOL	
T WO COL		VV2	LM/0077	0-0-10				
			 	<u>-</u>			123 TCP 3x 40 ML + HC	<u> </u>
			}	<u> </u>			TOC IXYOM-HO	 -
							SUOC IXIHE	
							NDMA JX1148	
					-		1,40 JOYANE 1X14C	
							CYANIDE INACH	
							CE-G ANIONS, TOS PER	l/.
			<u> </u>	<u> </u>			DISSOLE METAL	٣
					 			ł
<u> </u>			 -		 		TKN 351,3/H2504	
			_		ļ	 	<u> </u>	
L							·	
19-10-66		002	PMW15		\bigcirc	17	Voe: 3x40 ml +HeL	
							1,2,3, TCP 3x Han L-Hel	ļ.
							TOC IXYOML - HICL	83 41 5 5
-							SVOCS 2XIHZ	17777 F8
						·		024738
			 		 		NOMA DKINE	014765
			 -	 	 		1,4 DWXING IXIH'L	101/2(2
			<u> </u>	·	ļ <u> </u>		Cyanua /NAOS.	
							DESSELVED TOS PECH	100 13/T
							Disselved TALMBAN	002519
							TKN 351.3/H2504	1554 DO 1554
							1	[-
7-10-06		002	00	W	ч	18	TRIP BLANK	1
1-10-00		<i>UL W</i>	00	W		/ 4	TICIT DIAMON	1
1			-	ļ		10		į
1-10-00		002	00	W	2	19	Fold Blank	
								1
1							· 	ł
								ļ
		· · · · · · · · · · · · · · · · · · ·	<u> </u>		<u> </u>			ĺ
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L	·	L	<u>L</u>	L	<u> </u>		L	i

	SAMPLE II	DENTIFICA	ATION LOC	3	•				
)					Sampled	Sample]
	Date .	Time	Operable Unit	Well Location	Medium (Water or Soil)	Type ¹ (0 thru 6)	Sequential Sample No.	Remarks	
								ipment Blank	
ļ	Sample Ty		iary Sampi Trip Blank;		Duplicate; 2 - I MS/MSD;	-ieid Biank; 6 - Regula		причент втанк	
	2/2/20	4-1				2	9 Spill.	Field 3xVOC+HC	1
	1/1/06		OC 2	<u></u>	cu			FIELD STUDETHE	TB-01-06-06
ı			02	00	w	4	10		TB-01-06-06
1		001.3	002_	00_	ω	ч	-11		TB-01-06 00
ı		09:15	OC 2	PMWIY		0	12	NOCS 3X40m1 ffc1	
1								123TCP 3×40ml+HC1	
1								Toc 1 x 40ml + Hc1	
ľ								SVOCS 2×11+ & 024	nsy Lacunder
ı								NDMA 2XIII & 0240	17/024030
Ì				ļ				1,4 Dibxen 1 x 1 H 'c No	11/00/03
ŀ								LYANIDE IXILEML NAC	W 200 1827
ł		·		 				The American	71 0001303
1					<u>.</u>	·		LING ANIOUS, IDS, WEACLE	MAGE 001186
1				-		-		CLYG ANIOUS, TAS, PEACLE DISSOLUL TALMETA (+BO, TKN 35-1.3 H2504	EN 51 00 1506
								TKN 35-1.3 H2504	12318 200M
			L., -	70-13-6-					
ļ			αz	PMW23	<u> </u>	0	13	VOC 3x40 ml + He!	
Į						:		123769	
								Toe de	
Ī			-					SVOC 2×1/+ 'e	624061
١	* *							NDMM 01610/	024061
ŀ								1.4 Dime 1 1/1 + 2	624114
1									002513
ŀ								Diss. Mobils 1x Soon 1+'c	45318
١						-		TRN 12500ml	
1								Anions+Citatos 1x250ml	001367
				-,1				Cyanide 1x 1250	000/337
Į			002	64m330		0	14	VOC 3X40VOA+HCL	
1								123TCP	
					-			TAC	
1								SVOC 1x1# - 2	024310
ſ								NAMA 2 X SOOML & E	014017
l			- -					TKN 1 × 500 MC	001505
ł				 			·	NURS 457 + 21 x 720 WF	LO LL CO
-						 	· · · · · · · · · · · · · · · · · · ·	CLANIDE 1 x 125mL	0001337
ŀ				 				LUNG CALLON	024313
ŀ				 				1,4 DIOXANE IXIH	0015/1
ļ								DIS METALS	00 1317
- [<u> </u>					
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SAMPLE IC	DENTIFICA	TION LOG	•	•				
Date	Time	Operable Unit	Well Location	Sampled Medium (Water or Soil)	Sample Type ¹ (0 thru 6)	Sequential Sample No.	Remarks	
				Duplicate; 2 - I			uipment Blank	
Oampie Typ		rip Blank;		MS/MSD;	6 - Regula		apment blank	
201206	<u>-</u>					[1 '	
7/0.1		002	PMW 17	a W	0	37	VIC 3 X40ML HCC	•
FIXUE		0-2	THU CIA	<u> </u>		3/		•
		. ,	-	· .			• • • • • • • • • • • • • • • • • • •	
_ :				<u> </u>		[SUCC 2XIH	(114189
			<u> </u>				MDMA 2XIM	034366
					<u> </u>		14-DIGKANE IXIH	·
							CYANIDE NOAH	
							COG ANON TOS CHIA	
							dissolved Tal METAL	
							TKN 1/2804 1×500	
			· .				•	i
7-12-00		062	PM4171	W	0	38	VOC 3X40ML HOL	
							1.2,3TGP 3 K-40ML HCC	
							Toc 1 x 4ami Hol	
							SUGC DXIL	008/32
							HIXL AMON	07
							1,4 DIOKANE IXIK	023847
							CYANIDE NOAH	
							Cr Ha ANGORATE	003435
					ļ <u> </u>		dissolved To METAL	402150
							TKN Hy SOY 1 x 500	001330
7-12-00		DCI	PMW 170	, M	٥	39	VOC 3 X 48ML HCC	
							123TCP SX40ML Hel	
							TOC 1 X 40 mL HCL	
							SYOC 2×1H	A SALAN
							Alama Dest	2000
							historia 141H.	023547
			()		.*	▼;	EYANIDE NOAH	
							CLTG ANGOD TOSE	001383
	-						MISSALLA TAL META	004638
							TKN H2804 1x500	002569
							SVOC 2XIH	002569
			•				NOMA 2 KIH	914123
-							1,4 DO LAVE IXH	084265
				1			14 200 330	
7/13/06		802	PMWAI	W	0	40	VOC 9x4ML Hel	
-/10100	, , , , , , , , , , , ,	 v-					1,2,3 72 P 3 X40 m cl Hel	
							Tax 21111 111	
			-				CVA AVIII	024375
							SVOLZXIH	0 2 12 12 112426-0
							1 4 / 51 .00 4 - 1 / / / /	
							NOMA 2KIK	024064
							LYANIGE	024272 024264 024264 024264

Cr46 ANIONS, TDS. _03(386)
perchloseta

dissolved Ta L made -001plf

TKN 351.3 - 001560

SAMPLE II	JENTIFIC/	ATION LOC	·		I Comple		<u> </u>	٦
		Operable	Well	Sampled Medium	Sample Type ¹	Sequential		
Date	Time	Unit	Location	(Water or Soil)	(0 thru 6)	Sample No.	Remarks	<u>'</u>
Sample Ty		nary Sampl Trip Blank;		Duplicate; 2 - MS/MSD;	Field Blank; 6 - Regula		ipment Blank]
7-16-06	4-1	OC2	POJO A		2.	28	3/OC 3 X 40ML HCL	GOLD
7-61-06		862	10 QLD		14	29	NOC IX YORK HEL	Tasp
				·	1			
7-11-06	·	002	PMW20	A W	0	30		
m 11 ist		A 6 A	Poo	n , .		7 /	in a Carriage Hal	-
7-11-06		062	PML10	3ω	0	31	1,2,3 TCP 3 X 4 ML HCL	1
			·				1 (- 1)	1
					-		Noc 1x10m /tcc	4 23 8 46
	_		-				MOWY JXI,H.	913840 913840 913853 013858
			 		1.		1,4 DIUXANE /XI it	013858
	_						CHANKE NACH	
	_						CHANGE NACH	001381
							TKN HSOY	001569
	_						dissolved METAL	002510
]
7-11-06		062	PAW 20	2 2	0	32	VOC 3 x 40ML + HCL]
							123TCP 3 XYOML + GLL	4
				<u> </u>			Tix 1x4ml + Hel	60 (1003
							5VOC 1 X1H 2	024303
	—						NDMA IXIHZ	634389
							1,4 DIO XANE IXIH	014.301
			<u> </u>				CYANIDE Noch 125 Cra ANIONS TOS CHION	001376
		<u> </u>						001970
	-						TKN HISOY	001525
	-				-		dssolved The METEL	001270
7-11-06		002	PMW22	W	0	33		
			-	2 10 10	24 0			
7484G	M		2	coee	ege	34	11. 12. 11.	_
1-12-00	·	002	PMW 19	W		37	VBC 3 X40mL + HOL	1
_		<u> </u>					1237CP 3 NOME HELL	1
					 		TUC IXTOME ACC	008196
					· ·		Alama av /ii	00 8191
				· · · · · · · · · · · · · · · · · · ·			1.4 DOXANE IXII+	008197
							PYRNAGE NAL 194	303426
			 		<u> </u>		CH & ANIONSTDS HORDE	
							THN HOSSY	101559
	-						dissalval Tal METAL	00.1744
] ``
7/2-0		062	00	W	1	3.5	FIELD	1
7-10-06		862	00	W	4	36	TRIP	
			<u></u>			_		<u> </u>

SAMPLE IDEN	NTIFICATION LO	<u> </u>					_
		18/5"	Sampled Medium	Sample	Comment		
Date	Operable Unit	Well Location	Medium (Water or Soil)	Type ¹ (0 thru 6)	Sequential Sample No.	Remarks	
A	0 - Primary Samp		13	1		ipment Blank	-
cample type.	4 - Trip Blank;		/IS/MSD;	6 - Regula		ipmone Diame	İ
7-15-Ce	OC2	Amw 18		6	24	VOC 3 X40ML+HLL	
						42,37CP 3240 ML + HCC] -
						TOC IX40ML a HCL -	
					····	SVOC 2x 1H 2-	034184
		1				NDMA 2XIH 4 -	834133
		 		<u> </u>		14 DIOXAUE IX IHZ	024185
						1 GIBRAUS IXTHE	000/33
	- 	 				CA+6, ANIONS, TOS, PER	1/1/05/33
						C ANOUS, TOSICE	4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		 		<u></u>		dissolve Tal META	1 001000
		-				TKN 35/13/H1504	40000
		Α . /(-	\ / /		7 6		4
7-11-06	062	Pmul6A	lal	0	25	VIX 3 X 46ML + Hel	4
						1,2,3 TOP 3 X40M + HO	4
						TOC IX40MC - HOL	21/1106
						SUOC JXIHE-	024/81
						SHIXE AMOU	014/86
						1.4 DAXANE IXIITE	624187
						CYANIDE MADY-	000 1337
		1				Cre/ANIBUSTALL	001388
				4.6% 6.%		dssolved Tal METIL	000579
		T				TKN 351.7/H2504	002146
						///////	1
7-11-06	002	pmw/6A	3 W	8	16	VOC 3X40ML+HCC	1
					-	12,370 3×40ml + Hal	7
			<u> </u>			Toc 1x40ml +Hel	7
						SVOC 2×1H2	024114
						NOMS 2XIH	024057
	,					1,4 DIUXANE IXIN	024052
		1				CYANIDE/NACH	1337 ص
·				 		CA+6 IANGASIADS	
				-		dissolved TAL METAL	002511
				<u> </u>		TKN 351,3/H2504	023149
				-		111033725/112387	1000,
7-11-06	062	PMU/60	W	0	27	VOC 3 x YOML + 14CL	1
7-11-00		1				1,2,3 TGP 3x40ML + HCL	1
		 		<u> </u>		The is y yand & best	ſ
				-		SVOCZXIHŁ	214/75
	- · · · · 	 				Alama zulul	014175 014173 014173 014172 024179
		 		 		NOMA 241HE	124 172
		1		-		1,4-DIEXALE IXH CYANIDE/NOAH	1047(19
<u> </u>		 				CYANIA = INO.AN	1 2 -
		 				Crta ANIANS, TOS, Chlori	001370
		1				clissolud Tol METALS	002025
						TKN/H2504 -	002152
						·]

Date Time United Medical Type' Sequential	SAMPLE I	DENTIFICA	ATION LOC	3					_
Date Time Unit Location Water or Soil) (0 thin 6) Sample No. Remarks			Oporable)A/all	1 .	Sample	Seguential		
4-Trip Blank; 5-MS/MSD; 6-Regulatory Split. 7-16-06 0C2 PAN15 W 1 20 DJP VGC, 3X40m La HeL 123 TLP 3X40m La HeL 124 TL H 2 34464 TC L X40m L X H 2 34464 TC L X40m L X H 2 34464 TC L X40m TB, peculatory 201 TMMA 1 X H 2 34464 CAPANICIE FROM La ** A NIVAY TB, peculatory 201 TMA 25 J J J 14504 TMA 25 J J 14504 TMA 25 J J 14504 TMA 25 J J 14504 TMA 25 J J 14504 TMA 26 J X40m L X H 2 34478 TMA 36 J J 14504 TMA 37 J J 14504 TMA 37 J J 14504 TMA 37 J J 14504 TMA 37 J J 14504 TMA 37 J 14504 TMA 15 J 14504	Date	Time			1			Remarks	
7-16-06 0C2 PAULS W 1 20 BJP VOC 3 XYOM CHECK 123 TEP 3 XYOM CHECK 123 TEP 3 XYOM CHECK 124 TEP 3 XYOM CHECK 125 TE YOM CHECK 126 TE YOM CHECK 127 TO THE STATE OF THE	Sample Ty	pe: 0 - Prin	nary Sampl	e; 1 - Field	Duplicate; 2 - I	ield Blank;	3 - Equ	ipment Blank	1
VOC 38400 LAHL 12376 37404 + HC 12376 37404 + HC 12500 1x 1 H 2 1x 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		4 - 7	,		MS/MSD;	6 - Regula	tory Split.		[
133 Tep 3 x you me to compare the TOC I X you me to compare the TOC I X you me to compare the compare to the	7-10-06		002	PMJ 15	W		20	7) 3 0	1
75 C 1 x 40 M - 16C 0 5 Vac 1 x 11 x 2 5 Vac 2 x 1 x 1 x 3 x 3 x 3 x 3 x 3 x 3 x 3 x 3									ł
SVOC 1 x 1 H Z									<u>+</u>
1.4-1									ł
1.4-1								SVOC IXIHZ	317,083
CPANIDE Frach Property Prop									824574
								1,4-110XANE IXIUE	014260
Dissolved Mai, Magal 002528								CYANIOLE/NOOh	2 - 1
Dissolved Mai, Magal 002528								CRTE AUGU, TOS, PERCULAGE	2. de 00 / 20 9
7/10/06 7/1		···							
VOC 3x40mL+HCL (2)3 TEP 3x40 mL+HCL (2)3 TEP 3x40 mL+HCL (2)3 TEP 3x40 mL+HCL (2)3 TEP 3x40 mL+HCL (2)3 TEP 3x40 mL+HCL (2)3 TEP 3x40 mL+HCL (2)3 TEP 3x40 mL MEL (2)								TKN 3513/H28042	051556
1,3 76 3x40 ml + Hel 102 14276 12 16 1	7/15/06		002	PMU15	_ W	5	24]
TOC 1×100L +HCL STOC 2×142 STOC 2×142 NOMA 1×142 O24327 NOMA 1×142 O24327 MANIOTO MADA O001377 MANIOTO MADA O001377 MANIOTO MADA O001377 MANIOTO MADA O001377 MANIOTO MADA O001377 MANIOTO MADA O001377 MANIOTO MADA O001377 MANIOTO MADA O001375 MANIOTO MADA O01375 MANIOTO MADA O01375 MANIOTO MADA O01337 MANI	<u>L</u>			<u></u>					
Sinc 1x 14 & 014776 014776								17	
NAMA 1x H2 024 354 14 14 024 354 14 14 16 16 16 16 16 1									20076
NAMA 1x H2 024 354 14 14 024 354 14 14 16 16 16 16 16 1								·	02422
## 10-10 BC 2 PMWIS W B 22 VOC 3 X 40ML A HCL The property of the property				ļ					224259
								1,4-DIOXANE EXIHE	024181
7/14/16 0.2 PMW188 W 0 22 VOC, 3×70ml + Hel 12,37cp 3×40ml + Hel 324020 324071 14-00x207 14-00x207 14-00x207 14-00x207 14-00x207 14-00x207 14-00x207 14-00x207 14-00x207 15-00x2								GANGE NAOG	000/333
7/14/14 OC 2 PMW188 W O 22 VOC, 3×40ml : Hel 123TCP 3×40ml : Hel 123TCP 3×40ml : Hel 1240ZO 3voc. 2 x 1 H 2 0240ZO 3voc. 2 x 1 H 2 0240ZO 14 + Dexange 1 x 1 H 2 0240ZO 14 + Dexange 1 x 1 H 2 0240ZO 14 + Dexange 1 x 1 H 2 0240ZO 14 + Dexange 1 x 1 H 2 0240ZO 14 + Dexange 1 x 1 H 2 0240ZO 14 + Dexange 1 x 1 H 2 0240ZO 14 + Dexange 1 x 1 H 2 0240ZO 14 + Dexange 1 x 1 X 1 X 1 X 2 X 2 X 2 X 2 X 2 X 2 X 2 X								DECANONITAS, PECG LONIA	00 1375
7/16/16 OC 2 PMW188 W O 22 VOC, 3×40ml + Hel 1237CP 3×40ml + Hel 70c 1×40ml + Hel 324070 3×40ml + Hel 324070 3×40ml + Hel 324070 3×40ml + Hel 324070 3×40ml = 1×11 × 024071 1,4-Dioxone 1×11 × 024071 024071 024072									
1237CP 3×40mL+Hd 70c 1×40mL+Hd 70c 1×40mL+Hd 3voc. 2×1H 2 324070 NDMA 2×1H C 024071 14-NOXANE 1×1H C 024072 CYANDE/NACH CYANDE/NACH ANIONS/TDS, PEPCHLORL CO1497 1550LE-TOL METAL 002569 TKN 35/3/H2504 002569 TKN 35/3/H2504 002569 TLO-10 BC 2 VOC, 3×40mL Hcl 123 RP 3×4mC+Hcl BC 1×40m Hdcl 0×109368 NDML 2×1H - NDML 0×3H -								TKN 357,3/H1584 -	001555
1237CP 3×40mL+Hd 70c 1×40mL+Hd 70c 1×40mL+Hd 3voc. 2×1H 2 324070 NDMA 2×1H C 024071 14-NOXANE 1×1H C 024072 CYANDE/NACH CYANDE/NACH ANIONS/TDS, PEPCHLORL CO1497 1550LE-TOL METAL 002569 TKN 35/3/H2504 002569 TKN 35/3/H2504 002569 TLO-10 BC 2 VOC, 3×40mL Hcl 123 RP 3×4mC+Hcl BC 1×40m Hdcl 0×109368 NDML 2×1H - NDML 0×3H -	9/10/06	-	W.2	PMINIS	R 10		22 \$	VOC. 3×40ml = HL	
70C X 40ml + Hell 324070 34071 1	1/1404		000	11.45(0)			~2 =		
3 yoc. 2 x 1 H 2 324 627 NDMA 2 X 1 H C 024191 1,4-Doxane 1 X 1 H 2 024072 Cyanion / Nach 024072 Cyanion / Nach 021333 Canion / Ds. Perchaeu 02197 155 due Tal metal 025 8 TKN 35/3/H2504 BC 2 YOC, 3 x 40 ml - Hell BC 1 x 40 m - 1 Hell SVCX 2 X 1 H - 0 x 40 63		-							
NOMA 2 X H C 024071 1,4-DOKANE X H C 024072 CYANIOE /NACH 0001337 CATIONST TOS PERCHLORGE 001497 ASSOLUE TAL METAL 002569 TKN 3.5/3/H2504 002508 7-10-00 BC 1 PMW BAA W B 22 VOC, 3 X 4DML A HCL BC 1 X 4 5 M A HCL SVOX 2 X H = 024 063									224030
1,4-DOKANE IXINE 024072 CYANIDE/NACH 0001337 CYANIDE/NACH 0001337 CYANIDE/NACH 001337 CYANIDE/NACH 001497 ANIONSITOS, PEPCHLORUS 001497 (550LE-TAL MERL 002569 TWN 3513/H2SOY 002508 TWN 3513/H2SOY 002508 TUN 3513/H2SOY 002508 TOCK 3×40ML HCL BC 1×40M HCL SVCX JXIH- SVCX JXIH- OXIGG 68 NDML 2×(H- OXIGG 68									1 <i>624171</i>
Cyaniaz/Nach CATIONS, PSECHLORIS CO1497 ANIONS, TDS, PSECHLORIS CO1497 ASSOLVE TOL METAL 002569 TKN 35/3/H2SOY 002508 THO-10-100 SCJ PMW18AA W B 22 VOC, 3×40ML = HcL BC 1×40M = HcL BC 1×40M = HcL SVOX JX1H = 0×499369 NDML 2×(H - 0×499369 CAY 063									
7-10-16 BC 2 PMW18 A W B 22 VOC, 3x4DML = HCL BC 1 x4811 + HCL BC 1 x4811 + CD 23 GB NDML 2x (H - CD 4) GB 604 063			<u> </u>					CYANIDE /NASh	0001337
7-10-16 BC 2 PMW18 A W B 22 VOC, 3x4DML = HCL BC 1 x4811 + HCL BC 1 x4811 + CD 23 GB NDML 2x (H - CD 4) GB 604 063	· ···							CATIONS, TOS PERCHLOOL	001497
7-10-10 OC 2 PMW18 RA W B 22 VOC, 3×40ML = HCL 1,2,3 RCP 3×4MC+ HCL BC 1×45M = HCL 5VOX 2×14 - C34,9 869 NDML 2×(H - C34,063								resolve The METEL	002569
7-10-16 BC 2 PMW18 A W B 22 VOC, 3×40ML = Hcl 1,2,3728 3×4MC + Hcl BC 1×40M = Hcl 5VCX 2×14 - 0×19 3 69 NDML 2×(H - 0×19 63									002508
1,2,3 RP 3 X 4MC+ HCC BC 1 X 4 0 M 2 HCL SVOX 2X 1 H - 0 24 9 3 69 NDML 2 X (H - 0 24 0 63									
1,2,3 RP 3 X 4MC+ HCC BC 1 X 4 0 M 2 HCL SVOX 2X 1 H - 0 24 9 3 69 NDML 2 X (H - 0 24 0 63	7-10-00	2	862	PMW18	A W	0	22	VOC, 3x40MLa Hel	
BC 1 x40 m 1 HcL 0x19 9 3 69 SVX 1x14 - 0x19 9 3 69 NDML 1x (H - 0x19 64 063								1,2,3 TEP 3 x 4M LA HEL	ŀ
SVOX JX14- 639 369 NDML 1x(H - 64 063								B. 4 411 - 11 111.1	_
NDML 2x (H - 044 063								SVOC JXIH-	02/98/03
100//0/-2								NDML 2x (H - Compa	64063
								1,4 DIOXALE IXIH-	0.27002
									0001337
Crande /NAch - 0001337 Crande /NAch - 0001369								CHG ANDIONITOS PERC	1001369
degolved Tal MEGIL 00517								desolved Tal METAL	00517
TNU 002526									





QED Model MP20DT Calibration & Checkout Sheet

TECHNICIAN:

DATE: 7/3/06

INSTRUMENT INFORMATION

RENTAL ID#: MP20DT. 夕3

SERIAL NUMBER: QD\$2456

CALIBRATION INFORMATION |

SENS	DR RANGES
рН	0-14 Units
DO	0-500%
ORP	-999 to +999

Cond. 0-100mS/cm Turb. 0-1000NTU

> Factory certified Service center

COND	UCTIV	TTY
	Lot#_	5200
pH ZE	RO	
	Lot#_	NIA

pH SLOPE... Lot# 6075/6095/5212

DISSOI	LVED OXYGEN
	Lot#

Lot# 5/5/87

TURBIDITY ZERO Lot#__\\A

TURBIDITY SPAN Lot# 7/1/08 RESPONSE... BARBI

RESPONSE...

RESPONSE ...

RESPONSE ...

RESPONSE...

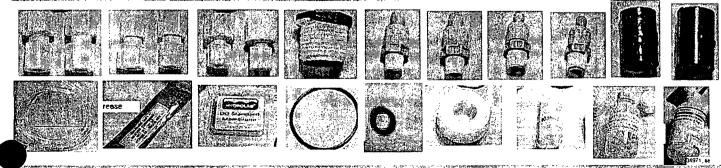
231

RESPONSE...

RESPONSE...

20

CCESSORIES INCLUDED WITH THIS RENTAL KIT



THANK YOU FOR RENTING FROM EQUIPCO

This instrument has been thoroughly tested by a factory certified service technician before delivery to you. If you have any questions of difficulties please call us immediately and request technical support

RENTALS



QED Model MP20DT Calibration & Checkout Sheet

TECHNICIAN:

DATE: 7/7/00

INSTRUMENT: INFORMATION

RENTAL ID#: MP20DT. △2

SERIAL NUMBER: Ona2348

CALIBRATION INFORMATION

SENSO	R RANGES
pН	0-14 Units
DO	0-500%
ORP	-999 to +999
Cond.	0-100mS/cm
Turb	0-1000NITH

CONDUCTIVITY
Lot# 520
pH ZERO
Lot#
DH SLOPE /62
609C
pH SLOPE 6025 6997 Lot#_5/9/
DISSOI VED OYVGEN

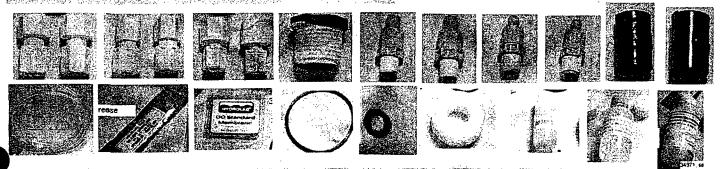
1 500
RESPONSE
RESPONSE
7,4,18
RESPONSE
100
RESPONSE
2 34
RESPONSE
NA
24 14
RESPONSE
20
20

RESPONSE...

Factory certified Service center

pH SLOPE 602-5 6997 Lot#_5/9/
DISSOLVED OXYGEN
REDOX Lot#
TURBIDITY ZERO Lot#/\tau
TURBIDITY SPAN Lot# 7/7/06
WITH THIS RENTAL KIT.

ACCESSORIES INCLUDED WITH THIS RENTAL KIT



THANK YOU FOR RENTING FROM EQUIPCO

This instrument has been thoroughly tested by a factory certified service technician before delivery to you.

If you have any questions or difficulties please call us immediately and request technical support.





QED Model MP20DT Calibration & Checkout Sheet

TECHNICIAN:

DATE: 7/3/06

INSTRUMENT INFORMATION

RENTAL ID#: MP20DT. 夕3

SERIAL NUMBER: QV\$2456

CALIBRATION INFORMATION

	SENS	0R	RAN	GE:	S
--	------	----	-----	-----	---

pН DO 0-14 Units 0-500%

ORP Cond. Turb.

-999 to +999

0-100mS/cm 0-1000NTU

Factory certified Service center

CONDUCTIVITY... pH ZERO...

p<u>H S</u>LOPE...

Lot# 6025/6095/5212

DISSOLVED OXYGEN...

Lot# 5/5/07

TURBIDITY ZERO

Lot#____\A___

TURBIDITY SPAN

Lot# 7/1/08

RESPONSE...

10x10

RESPONSE ...

RESPONSE...

2/4/2

RESPONSE...

RESPONSE...

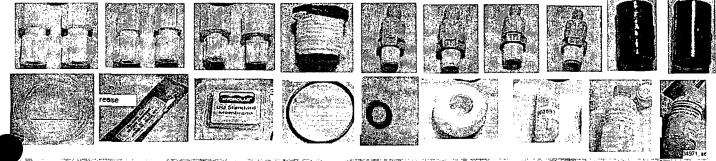
231

RESPONSE...

RESPONSE...

20

ACCESSORIES INCLUDED WITH THIS RENTAL KIT



THANK YOU FOR RENTING FROM EQUIPCO
This instrument has been thoroughly tested by a factory certified service technician before delivery to you! If you have any questions or difficulties please callius immediately and request technical support.

1-800-550-5875



QED Model MP20DT Calibration & Checkout Sheet

TECHNICIAN:

DATE: 7/7/80

INSTRUMENT INFORMATION

RENTAL ID#: MP20DT. DZ

SERIAL NUMBER: ONO 2348

CALIBRATION INFORMATION

SENSOR RANGES.

pH DO 0-14 Units 0-500%

ORP

-999 to +999

Cond. Turb. 0-100mS/cm 0-1000NTU

Factory certified Service center	I
	ļ

CONDUCTIVITY
Lot# 5200
pH ZERO
Lot#
pH SLOPE 682- 6997 Lot#_5/9/
Lot#_5/9/
DISSOLVED OXYGEN
Lot#
REDOX
Lot# 5/5/59
TURBIDITY ZERO
Lot# // *
TURBIDITY SPAN
10# 2/2/06

RESPONSE...

RESPONSE...

RESPONSE...

Cors

RESPONSE...

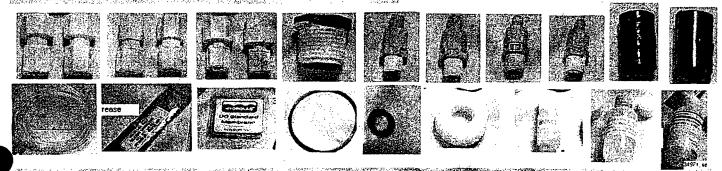
A A

RESPONSE...

A A

RESPONSE...

ACCESSORIES INCLUDED WITH THIS RENTAL KIT



THANK YOU FOR RENTING FROM EQUIPEO

This instrument has been thoroughly tested by a factory certified service technician before delivery to you.

If you have any questions or difficulties please call us immediately, and request technical support.



RENTALS



QED Model MP20DT Calibration & Checkout Sheet

TECHNICIAN:

DATE: 7/3/06

INSTRUMENT INFORMATION

RENTAL ID#: MP20DT. \$\rightarrow\$3

SERIAL NUMBER: QD\$2456

CALIBRATION INFORMATION

2FN2(JR RANGES
~LJ	0.14 Inita

DO **ORP** Cond. Turb.

> Factory certified Service center

0-14 Units
0-500%
-999 to +999
0-100mS/cm
0-1000NTU

COND	OCHV	11 Y
	Lot#_	5200
pH ZE	RO	
	Lot#_	NA

H SLO	OPE	
	Lot# 6025/6095/5212	

DISSO	LVED OXYGEN	
	Lot#	

REDO	ў	
. []	Lot#_	5/5/07

TURBIDITY ZERO		
Lota	#µ\A	

TURB	IDITY	SPAN
	Lot#	7/1/06

RESPONSE...

10x10 RESPONSE...

RESPONSE ...

RESPONSE...

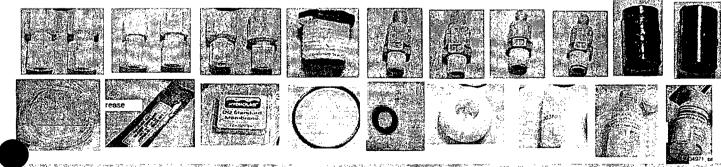
RESPONSE...

231

RESPONSE...

RESPONSE...

ACCESSORIES INCLUDED WITH THIS RENTAL KIT



THANK YOU FOR RENTING FROM EQUIPCO

This instrument has been thoroughly tested by a factory certified service technician before delivery to you. If you have any questions or difficulties please call us; immediately and request technical supports



RENTALS



QED Model MP20DT Calibration & Checkout Sheet

TECHNICIAN:

CONDUCTIVITY...

DATE: 2/7/00

INSTRUMENT INFORMATION

RENTAL ID#: MP20DT. 02

SERIAL NUMBER: Onaly 48

CALIBRATION INFORMATION

SENSO	R RANGES
рН	0-14 Units
DO	0-500%
ORP	-999 to +999
Cond.	0-100mS/cm
Turb.	0-1000NTU

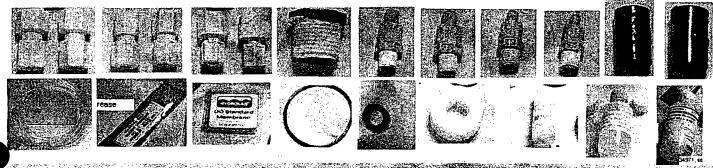
	LOT#	
pH ZERO		
	Lot#	
pH SL	OPE 6025	
	OPE 6825 6897 Lot# <u>5</u> /9/	
	LVED OXYGEN	
	5 · 22 011 GE	
	Lot#	
REDO	X	
	٠	
ت	Lot#_ 5/5/59	
TIDDI	IDITY ZERO	
TUKDI	DITT ZERU	
11	Lot# NA	

TURBIDITY SPAN

RESPONSE
100
RESPONSE
RESPONSE
7,4,18
RESPONSE
.(08
RESPONSE
2 31%
RESPONSE
NA
RESPONSE
٠ ١

Factory certified Service center

ACCESSORIES INCLUDED WITH THIS RENTAL KIT



THANK YOU FOR RENTING FROM EQUIPCO

This instrument has been thoroughly tested by a factory certified service technician before delivery to you.

If you have any questions or difficulties please call us immediately and request technical support.



RENTALS



QED Model MP20DT Calibration & Checkout Sheet

TECHNICIAN:

DATE: 7/3/06

INSTRUMENT INFORMATION

SERIAL NUMBER: QO\$2456

CALIBRATION INFORMATION

SENSOR RANGES...

pH DO 0-14 Units 0-500%

ORP Cond. -999 to +999

Turb.

0-100mS/cm 0-1000NTU

Factory certified Service center

pH ZERO... Lot# N/A

CONDUCTIVITY...

p<u>H S</u>LOPE...

Lot# 6025/6095/5212

DISSOLVED OXYGEN...

Lot#_ 5/5/87

TURBIDITY ZERO

Lot#__µ\A

TURBIDITY SPAN

Lot# 7/1/08

RESPONSE...

10000

RESPONSE...

RESPONSE...

7/4/7

RESPONSE...

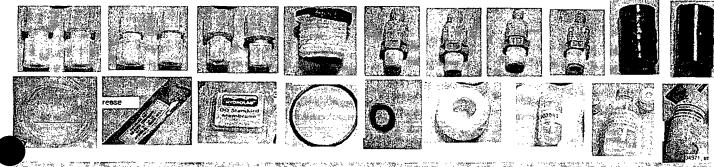
RESPONSE...

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RESPONSE...

RESPONSE...

ACCESSORIES INCLUDED WITH THIS RENTAL KIT



THANK YOU FOR RENTING FROM EQUIPCO
This instrument has been thoroughly tested by a factory certified service technician before delivery to you If you have any questions or difficulties please call us immediately and request technical support:



RENTALS



QED Model MP20DT Calibration & Checkout Sheet

TECHNICIAN:

DATE: 7/7/86

INSTRUMENT INFORMATION

RENTAL ID#: MP20DT. Δ^2

SERIAL NUMBER: On a 2348

CALIBRATION INFORMATION

SENSO	R RANGES
pН	0-14 Units
DO	0-500%
ORP	-999 to +999
Cond.	0-100mS/cm

Factory certified Service center

0-1000NTU

Turb.

CONDUCTIVITY		
Lot#	5200	
pH ZERO		
Lot#_		
pH SLOPE	6025	

1000
RESPONSE

RESPONSE

RESPONSE...

pH SLC	OPE Lot#_	6090	
	LUI#_)(''	-

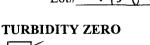
RESI ONSE.
7,4,18

DISSO	LVED (OXYGE
REDO	X	10

RESPUNSE
100

REDO	X	1
	Lot#_	5/5/19

RESPONS	E



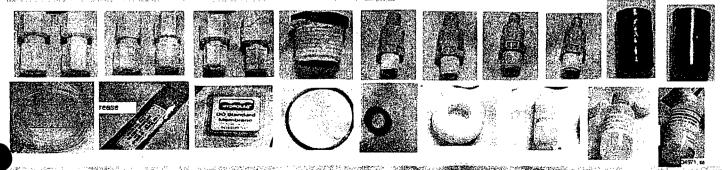
5 31 ₄₄	<u> </u>
 	-

Lot# NA TURBIDITY SPAN

RESPONSE...

RESPONSE...

ACCESSORIES INCLUDED WITH THIS RENTAL KIT



THANK YOU FOR RENTING FROM EQUIPCO

This instrument has been thoroughly tested by a factory certified service technician before delivery to you. If you have any questions or difficulties please call us immediately and request technical support

1-800-550-5875

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Appendix I

Waste Disposal Documentation

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i:			

60	데 GE	ENERATING SITE
	Omega Chemical OU-2	Omega Project
		Geary Street (and vicinity)
		Santa Fe Springs, CA
ATOF	PHONE NO. () SITE CONTACT	PROFILE NO.
GENERATOR	CONTAINERS: No. 1 GALLONS X 50	Gallons WEIGHT
. G. 10. €	TYPE: XX TANK DUMP DRUMS CARTONS OTHER _	Drilling, Groundwater
	WASTE DESCRIPTION NON-HAZARDOUS WATER GENERATING PROCE	and/or Decon Water
UETED	COMPONENTS OF WASTE PPM % COM WATER 99-100%	PONENTS OF WASTE PPM %
O.BE.COMPLI	2 TPH < 0.1%	
<u> 1</u> 996	3VOC's<0.1%6H	BESI # 125785
Ĕ	3	OTHER
	HANDLING INSTRUCTIONS: WEAR APPROPRIATE PROTECTIVE CLO	THING
	THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% Larry Moothart as Agent of Omega Ch Typed or Printed Full Name & SIGNATURE	nemical 07 / 03 / 06
	NIETO AND SONS TRUCKING, INC.	EPA I.D. NO.
击.	1281 BREA CANYON BOAD	NO.
6	ADDRESS BREA, CALIFORNIA 92821 CITY, STATE, ZIP	SERVICE ORDER NO
RANSPORTER		PICK UP DATE
Œ.	PHONE NO. (714) 990-6855 GLBERT GARCIA MU	W. Handa 07/ 03/06
	TRUCK, UNIT, I.D. NO. 240-377 TYPED OR PRINTED FULL NAME & SIGNATURE	EPA I.D.
	NAME DeMenno Kerdoon	I.D. NO. DISPOSAL METHOD
	ADDRESS 2000 N. Alameda Street	LANDFILL A RECYCLER
	CITY, STATE, ZIP Compton, CA 90222	Recycler
	PHONE NO. 310-537-7100	1 11
AT.	FAC# DMEGA BOMAL P. SVAY NA	SURPLY OT 106/08
LISD/FACIULY	ID# 1713 TYPED OR PRINTED FULL NAME & SIGNATURE	DATE
	GEN OLD/NEW L A TONS	
	TRANS S B	
	C/Q RT/CD HWDF NONE DISCREPAN	CY

29468

0
Y

		GENERATING SITE
	Omega Chemical OU-2	Omega Project
	ADDRESS 12504 Whittier Blvd.	12035 Burke Street
	CITY, STATE, ZIP Whittier, CA 90602	Santa Fe Springs, CA
ATO!	PHONE NO. () SITE CONTACT	PROFILE NO.
GENERATOR	CONTAINERS: No1 GALLONS \$\times 50	Gallons WEIGHT
8<	TYPE: TANK DUMP DRUMS CARTONS OTHE	R / 9/20UV D
e e	WASTE DESCRIPTION NON-HAZARDOUS MUD / Water GENERATING P	Drilling Mud / Water
. 古	^- ~ ^	COMPONENTS OF WASTE (PPM %
COMPI	7011	
90 10		BESI # 125785
P	PROPERTIES PH 7 SOLID X LIQUID SLUDGE SLUBRY	
	HANDLING INSTRUCTIONS: WEAR APPROPRIATE PROTECTIVE C	
	THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100%	05/20/06
	WASTE AS DESCRIBED IS 100% NON-HAZARDOUS. Larry Moothart as Agent of Omega TYPED OR PRINTED FULL NAME & SIGNATION	· · · · · · · · · · · · · · · · · · ·
	NIETO AND SONS TRUCKING, INC.	EPA LD. NO.
	ADDRESS 1281 BREA CANYON ROAD	SERVICE ORDER NO.
SPOF	CITY, STATE, ZIP BREA, CALIFORNIA 92821	PICK UP DATE05/ 30 / 06
I HAN	PHONE NO. (714) 990-6855	$\int \int \int d\mathbf{p} d\mathbf{p} \int $
	TRUCK, UNIT, I.D. NO. 7 352 TYPED OR PRINTED FULL NAME & SIGNATU	JRE DATE
	NAME DeMenno Kerdoon	EPA I.D. NO.
	ADDRESS 2000 N. Alameda Street	DISPOSAL METHOD LANDFILL RECYCLER
	CITY, STATE, ZIP Compton, CA 90222	
TSD FACILITY &	PHONE NO. (310) 537-7100	
DEA	# 1/217510 CWD CHOCODS	950565
<u>S</u>	TYPED OR PRINTED FULL NAME & SIGNATU	DATE
	GEN OLDINEW L A TONS	
	TRANS S B	
	C/Q HWDF NONE DISCRE	PANCY

			GENERATING SITE .	* .
	Omega Chemical OL	J-2	Omega Project	
	ADDRESS 12504 Whittier Blvd.		Geary Street	
	CITY, STATE, ZIP Whittier, CA 90602		(and vicinity) Santa Fe Springs, (CA
GENERATOR	PHONE NO. ()	SITE CONTACT	PROFILE NO	·
INEH INEH	CONTAINERS: No.	L GALLO	ONS 3500 Gallons WEIGHT	
. (Ö. 	TYPE: X TANK DUMP	☐ DRUMS ☐ CARTON	NS OTHERDrilling, Gro	oundwater
	WASTE DESCRIPTION NON-HAZARDO	US WATER	GENERATING PROCESS and/or Decor	n Water
orbe completed	COMPONENTS OF WASTE WATER	99-100%	COMPONENTS OF WASTE 4.	PPM %
No Co	TPH	< 0.1%	5	
3 80	3VOC's	< 0.1%	6. BESI # 125785	
	PROPERTIES pH	LIQUID SLUDGE	SLURRY OTHER	
	HANDLING INSTRUCTIONS: WEAR AF	PROPRIATE PROT	ECTIVE CLOTHING	·
	THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% NON-HAZARDOUS.	Larry Moothart as Ag	ent of Omega Chemical	06/ 13 / 06
		TYPED OR PRINTED FULI	L NAME & SIGNATURE	DATE
	NAME NIETO AND SONS TR	UCKING, INC.	EPA I.D. NO.	
ij.	ADDRESS 1281 BREA CANYON	N ROAD	SERVICE ORDER NO.	
RANSPORTE	CITY, STATE, ZIP BREA, CALIFOR	NIA 92821	PICK UP DATE	06/ 13 / 06
N. T.	PHONE NO. (714) 990-6855	- 1/1		as/ 10/05
	TRUCK, UNIT, I.D. NO.	TYPED OR PRINTED FULL	NAME & SIGNATURE) 06/ 13 / 06 DATE
	NAME DeMenno Kerdoon		EPA I.D. NO.	
	ADDRESS 2000 N. Alameda St	reet	LANDFILL [RECYCLER
	CITY, STATE, ZIP Compton, CA 90222	2	Recycler	
	PHONE NO. 310-537-7100			3
N. C	FAC# DMFGA	RODAL	0 RE 12/2	104/20 hc
TSD FACISITY	10#_\VA86\	TYPED OR PRINTED FULL	NAME & SIGNATURE	DATE
	GEN OLD/NEW	L A TONS		
	TRANS	S B		
	RT/	CD HWDF		
Control of the	C/O	NONE	DISCREPANCY	

29548

3.59 x 44 8		GENERATING SITE
	Omega Chemical OU-2	Omega Project
	12504 Whittier Blvd.	Garey Street (and vicinity)
	CITY, STATE, ZIP Whittier, CA 90602	Santa Fe Springs, CA
ATOR	PHONE NO. () SITE CONTACT	
BY GENERATOR	CONTAINERS: No. 1 GALLONS 466	O Gallons WISIGHT
© Xa	I think the control of the control o	Drilling, Groundwater
	MASTE DESCRIPTION NON-HAZARDOUS WATER GENERATING F	PROCESS and/or Decon Water
COMPLETED	WASTE DESCRIPTION NON-HAZARDOUS WATER GENERATING F COMPONENTS OF WASTE 99-100% 4	COMPONENTS OF WASTE PPM %
S		
TO BE	3 VOC's <0.1% 6.	
	PROPERTIES PH 7 G SOLID M LIQUID G SLUPGE SLUPRY	
	HANDLING INSTRUCTIONS: WEAR APPROPRIATE PROTECTIVE C	LOTHING
	THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% NON-HAZARDOUS. Larry Moothart as Agent of Omega Typed or Printed Full Name & SIGNAT	Chemical 06/ 08/06
	NIETO AND SONS TRUCKING, INC.	EPA I.D. NO.
RTER	1281 BREA CANYON ROAD	SERVICE OF DER NO.
TRANSPORTER	RREA CALIFORNIA 92821	PICK UP DATE
TRAI	PHONE NO. (714) 990-6855 MIGUEL CIARCIA 11	Neger 1 06/ 08/06
	TRUCK, UNIT, I.D. NO. 244-325 TYPED OR PRINTED FULL NAME & SIGNATURE	· · · · · · · · · · · · · · · · · · ·
	NAME DeMenno Kerdoon	EPA I.D. NO.
	ADDRESS 2000 N. Alameda Street	DISPOSAL METHOD LANDFILL ARCYCLER
_خ	CITY, STATE, ZIP Compton, CA 90222	Recycler
	PHONE NO. 310-537-7100	
TSD FACILITY	FAC# DUEGH GWOOT ECUE GA ID# 10 3714 TYPED OR PRINTED FULL NAME & SIGNATU	DATE DATE
	10#	JARE)
	GEN . OLD/NEW L A TONS	
	TRANS. S B	
	RT/CD HWDF	

29549

		GENERATING SITE
	Omega Chemical OU-2	Omega Project
	12504 Whittier Blvd.	Burke & Sorrenson (and vicinity)
	CITY, STATE, ZIP Whittier, CA 90602	Santa Fe Springs, CA
TOR	OUTC .	PROFILE NO.
GENERATOR	CONTAINERS: No. 1 GALLONS 500	Gallons WEIGHT
BY GE	01.77	Drilling, Groundwater
	NON-HAZARDOUS WATER GENERATING PR	ROCESS and/or Decon Water COMPONENTS OF WASTE PPM %
COMPLETED	PPM 76	CONFORMATION AND TO
₹ S	2. TPH <0.1% 5.	
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	HANDLING INSTRUCTIONS: WEAR APPROPRIATE PROTECTIVE C	LOTTING
	THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 190% NON-HAZARDOUS. Larry Moothan as Agent of Original Typed or Printed Full Name & SIGNATU	
	NIETO AND SONS TRUCKING, INC.	EPA LD. NO.
TER	1281 BREA CANYON ROAD	SERVICE ORDER NO.
TRANSPORTER	BREA, CALIFORNIA 92821	PICK UP DATE 06/ 08 / 06
HAN	(714) 990-6855	
	TRUCK, UNIT, I.D. NO. 204-367 TYPED OR PRINTED FULL NAME & SIGNATURE	
	NAME DeMenno Kerdoon	EPA ID, NO,
	ADDRESS 2000 N. Alameda Street	DISPOSAL METHOD LAVDFILL RECYCLER
	CITY, STATE, ZIP Compton, CA 90222	Recycler
5	PHONE NO. 310-537-7100	
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	ID# 103713 TYPED OR PRINTED FULL NAME & STGNATUR	DATE
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五年新	C/Q HWDF NONE DISCREP.	ANCY .

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	NAME	Omega Chemical (OU-2		Omega Project	· · · · · · · · · · · · · · · · · · ·
	ADDRESS	12504 Whittier Bh	vd.		12035 Burke Street	<u> </u>
	CITY, STATE, ZIP	Whittier, CA 9060	2		Santa Fe Springs, C	CA
ERATOR	PHONE NO.	()	SITE CONTACT		PROFILE NO.	
		CONTAINERS: No.	1	ALLONS ×200	o Gallons weight	
N GEN	TYPE:	TANK DUMP		RTONS OTHER		
TED BY	WASTE DESCRI	NON-HAZARI		GENERATING PI	Drilling Mud	Am I Am
Ж		PONENTS OF WASTE	PPM %		COMPONENTS OF WASTE	PPM %
COMPL				4		
0 HE 0	2			5.	BESI # 125785	
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	NON-HAZ	ARDOUS ARDOUS	3,1,1,0,1,1,1	Agent of Onlega FULL NAME & SIGNATU		05/ 26 / 06 **
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	TRUCK, UNIT, I.D	o Ti O secret	GLRERT TYPED OR PRINTED	GARCIA P	fellet Marca	05/ 26 / 06 DATE
		DeMenno Kerdoo	on		EPA LD. NO.	
	NAME	2000 N. Alameda	Street			DISPOSAL METHOD RECYCLER
	CITY, STATE, ZIP	Compton, CA 902	222			
TSD FACILITY	PHONE NO	(310) 537-7100				
A S	PHONE NO		CULTER	-lacon	San Pro-	= 5/31 log
130		•	TYPED OR PRINTED	FULL NAME & SIGNATULE	RE	DATE
	GEN	OLD/NEW	L A TONS			
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	C/Q		RT/CD HWDF	NE DISCREI	PANCY	
#02	1	l '	1 1 1,0.	1 2.33,10,		

16.22	GENERATING SITE
	NAME Omega Chemical OU-2 Bruke & Serenson
	ADDRESS 42504 Whittier Blvd Santa Fe Springs
\$65 \$65 \$4 \$2 \$4	CITY, STATE, ZIP Whittier Ca. 90602
TOR	SITE PHONE NO PROFILE NO
BY GENERATOR	CONTAINERS: No GALLONS X
Y GE	TYPE: TANK DUMP DRUMS CARTONS OTHER
ETED B	WASTE DESCRIPTION GENERATING PROCESS COMPONENTS OF WASTE PPM % COMPONENTS OF WASTE PPM %
	<u> 99100</u>
COMP	10 BEST POT 125785
0.BE	3
	PROPERTIES PH FIU SOLID A LIQUID SLUDGE SLURRY OTHER
	HANDLING INSTRUCTIONS: LEAN CALL OF CONTROL
	WASTE AS DESCRIBED IS 100% WRY MOOTHET BELSIVE 5/24/05 TYPED OR PRINTED FULL NAME & SIGNATURE 18/98/2007 DATE
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ISPORTER ***	NIETO AND SONS TRUCKING, INC. 1281 BREA CANYON ROAD
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TRANSPOF	NIETO AND SONS TRUCKING, INC. ADDRESS 1281 BREA CANYON ROAD SERVICE ORDER NO. OTY, STATE, ZIP BREA, CALIFORNIA 92821 PHONE NO. (714) 990-6855 TRUCK, UNIT, I.D. NO. TYPED OF PRINTED FULL NAME & SIGNATURE PARA SIGNATURE EPA I.D. NO. SERVICE ORDER NO. TYPED OF PRINTED FULL NAME & SIGNATURE EPA I.D. OMPONO YOR COO O
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TRANSPOF	NAME NAME ADDRESS 1281 BREA CANYON ROAD ADDRESS 1281 BREA, CALIFORNIA 92821 PHONE NO. (714) 990-6855 TRUCK, UNIT, LD. NO. TYPED OF PRINTED FULL NAME & SIGNATURE DISPOSAL METHOD DISPOSAL METHOD CITY, STATE, ZIP CITY, STATE, ZIP PHONE NO. 300-537-7100 FAC# DMF GTA TYPED OR PRINTED FULL NAME & SIGNATURE DATE DISPOSAL METHOD TYPED OR PRINTED FULL NAME & SIGNATURE DATE DATE DATE DATE DATE DATE DATE DATE

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NO.

		GENERATING SITE
	Omega Chemical OU-2	Omega Project
	12504 Whittier Blvd.	Arlee Avenue & Terradell Street
	CITY, STATE, ZIP Whittier, CA 90602	(and vicinity) Santa Fe Springs, CA
ПАТОВ	PHONE NO. SITE CONTACT	PROFILE NO. 205-240-0Y
ENER	CONTAINERS: No1 GALLONS 400	O Gallons WEIGHT
9 0 0	TANK DIMD	•
100 Sept. 1	NON-HAZARDOUS MUD	Drilling Mud
ETED	WASTE DESCRIPTION GENERATING PI	COMPONENTS OF WASTE PPM %
	1 4	
COMPL		
BE	5	
10	3	BESI # 125785
	PROPERTIES PH 7 SOLID LIQUID SLUDGE SLURRY	OTHER
	HANDLING INSTRUCTIONS: WEAR APPROPRIATE PROTECTIVE C	LOTHING
	THE GENERATOR CERTIFIES THAT THE	
	WASTE AS DESCRIBED IS 100% Larry Moothart as Agent of Omega	Chemical 05/ 24 / 06
	TYPED OR PRINTED FULL NAME & SIGNATU	
	NIETO AND SONS TRUCKING, INC.	EPA I.D. NO.
RTER	ADDRESS 1281 BREA CANYON ROAD	SERVICE ORDER NO.
SROF	CITY, STATE, ZIP BREA, CALIFORNIA 92821	05/ 24 / 06
RANSBO	(74.4) 000 0055	- 0.4
	TRUCK, UNIT, I.D. NO. 244-328 TYPED OR PRINTED FULL NAME & SIGNATURE	
	Liquid Waste Management	EPA LD. NO.
	56533 Highway 58	DISPOSAL METHOD LANDFILL RECYCLER
	CITY, STATE, ZIP McKittrick, CA 93251	SOUDIFICATION
TSDIFACILITY	PHONE NO. (661) 762-7607	
Ă.	MIKE KIVERS /	Muffa_ 5/26/06
ES.	TYPED OR PRINTED FULL NAME & SIGNATURE	RE DATE
	GEN OLD/NEW L A TONS	,
	TRANS S B	
	C/Q HWDF NONE DISCREI	PANCY

IP.			TPST Se		_		A		101		
	Non-Hazard								nitegi/;»	C. D. Der St. Contract of the	
	Date of Shipment:	Responsible fo	r Payment:	Transport			Facility #:	l	ven by TPST:		Load#
	·	BESI	<u></u>	418	_	32	07	269			0104
	Generator's Name and Billing OMEGA CHEMICAI 12504 WHITTIER	OU-2				ator's Phone to Contact:	#: 		Generator's t	JS EPA ID No	
	WHITTIER, CA 90	502									
TO VICE STATE OF THE PARTY OF T					FAX#:	<u>,</u>			Customer Acc	ount Number w	ith TPST:
dia managana di	Consultant's Name and Billin	•			Consu	Itant's Phone	: #: 				
A STATE OF THE STA	ARCADIS GERAGH	ITY & MILLER				to Contact:					
A COLUMN TO THE PARTY OF THE PA				:	FAX#:				Customer Acco	ount Number wi	th TPST:
N I Laboration (NO)	Generation Site (Transport from OMEGA PROJECT				Site Ph	one #:			BTEX Levels		
ant.	10135 GEARY AVE WHITTIER, CA 906				Person	to Contact:	······································		TPH Levels		
Generator and/or Consultant					FAX#:				AVG. Levels		
or Co	Designated Facility (Transport TPST SOIL RECYC	LERS OF CA)			Phone #: 362-600	1.		Facility Permi	t Numbers	
and	12328 HIBISCUS A ADELANTO, CA 92				1 .	to Contact: ENA JEF	EDEV				
ator					FAX#:					•	
ner	Transporter Name and Mailing		<u> </u>		760-246-8004						
95	BELSHIRE ENVIRO			4	Transporter's Phone #: 949-460-5200			Transporter's US EPA ID No.: CAR000165175			
	25971 TOWNE CE			;	Person to Contact: ARRY MOOTHART			Transporter's DOT No.:			
П	LAKE FOREST, CA		SI# 124565	.03	FAX#:	I MOOTI	TAK I		450647 Customer Accor		h TPST:
					949-4	60-5210	3		100019	73	
	Description of Soil	Moisture Content	Contaminated b	y: Approx	c. Qty:	Descripti	on of Deliv	егу	Gross Weight	Tare Weight	Net Weight
	Sand O Organic O Clay O Other O	0 - 10%	Gas 🗅 Diesel 🗅 Other 🗅					4	41420	31600	4600
	Sand 🔾 Organic 🗆 Clay 🔾 Other 🖸	0 - 10%	Gas 🗅 Diesel 🗅 Other 🖸								2.31
	List any exception to items listed ab						le Ticket#	184	1		
	Generator's and/or consulta Sheet completed and certifie any way.										
	Print or Type Name:	Generator 🗅	Consultant	"	ature and	date:		/		, ,	Year Vear
	Transporter's certification:					and certifu	that such	soil is h	eing delivered		323
Transporter	condition as when received. without off-loading, adding	I/We further cert	tify that this soil	is being d	lirectly i	transported	from the (
Tran	Print or Type Name: Fall Ram	39) (د	(T)	Signa	ature and	dated		/	2	Month D	Year P(OL
4	Discrepancies:	AC# OME	217			O.					
acility	II	710108	<u>`U</u>								
	Recycling Facility certifies the	receipt of the soil co	overed by this man	ifest except	as noted	above:	·.				
Recyc	Print or Type Name:				ature and		5/20	0/1	Ro		

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yv.	Mamtest		TPST Soil Non-	I R ec Hazaro	_		A		e de Mai	ilicel iz k	
	Date of Shipment:	Responsible for		ransporte			Facility #:	Gi	ven by TPST:		Load#
	5124105	BESI	1	11x_l	732		07	2699	3 1		001
	Generator's Name and Billing Address: OMEGA CHEMICAL OU-2 12504 WHITTIER BLVD. WHITTIER, CA 90602				ator's Phone to Contact:	#:		Generator's L	JS EPA ID No.		
					FAX#:				Customer Acco	ount Number wi	th TPST:
	Consultant's Name and Billin					ltant's Phone	#:	-	_		
	ARCADIS GERAGI	HIT & MILLER			FAX#:	to Contact:			Customer Acco	unt Number wi	h TPST:
	Generation Site (Transport from OMEGA PROJECT				Site Pl		·		BTEX Levels		
ant	10135 GEARY AVI WHITTIÉR, CA 90					to Contact:	ALL .		TPH Levels		
Consultant				-	FAX#:				AVG. Levels	#t- ²	
× Co	Designated Facility (Transpor					Phone #: 862-800	1		Facility Permit	Numbers	
Generator and/or	12328 HIBISCUS ADELANTO, CA 9					to Contact: ENA JEF	FREY				
erato		·			FAX#: 760- :	246-800	4				
Gen	Transporter Name and Mailir BELSHIRE ENVIRO	ONMENTAL			Transporter's Phone #: 949-460-5200			Transporter's US EPA ID No.: CARO00165175			
ta I	25971 TOWNE CE LAKE FOREST, CA				Person to Contact: ARRY MOOTHART		Transporter's DOT No.:				
	with raying try		6I# 12 4565. (FAX#:				Customer Accou		h TPST:
	Description of Soil	Moisture Content	Contaminated by:			160-521 Descripti	on of Deliv	erv	100019 Gross Weight		Net Weight
		0 - 10% D	Gas 🗅	Пррисл	,.		***			· · · · ·	
	Sand O Organic O Clay O Other O	10 - 20% Q 20% - over Q 0 - 10% Q	Diesel Control			2 Bin			41110	4770	740
	Sand O Organic O Clay O Other O	10 - 20% Q 20% - over Q	Diesel 🗆 Other 🚨							L	2.71
	List any exception to items listed a						ale Ticket#				
THE WILLIAM STATE OF THE STATE	Generator's and/or consult Sheet completed and certifi any way.	tant's certification: I ied by me/us for the	I/We certify that the Generation Site sh	e soil refe own abo	erenced ve and	herein is tal nothing has	ken entirely been adde	y from th d or don	iose soils desc e to such soil	ribed in the S that would a	Soil Data Ilter it in
(A)(EQ.)	Print or Type Name: IARRY MOOTHAR	Generator D	Consultant O	1 "	ature and	date:		<u> </u>		Month 1	24 Of
Transporter	Transporter's certification: condition as when received without off-loading, adding	I/We acknowledge d. I/We further ceri	receipt of the soil if	described being d	d above lirectly	transported	from the	soil is b Generati	eing delivered on Site to the	l in exactly Designated	the same Facility
Trans	Print or Type Name:	CO3CT,	39CT)	Sign	ature and	date:	L	***************************************			Day Year 24 OL
acility	Discrépancies: F/	AC# DMF 1 # 10107	9								
7	Recycling Facility certifies th	ne receipt of the soil co	vered by this manife	 							
Recycl	Print or Type Name:			Sign	ature and	. 5/2	4/01	0_			
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	Omega Chemical OU-2	Omega Project
	ADDRESS 12504 Whittier Blvd.	Washington & Lambert Road
Ľ	CITY, STATE, ZIP Whittier, CA 90602	(and vicinity) Santa Fe Springs, CA
ATC.	PHONE NO. () SITE CONTACT	PROFILE NO.
ENERATOR	CONTAINERS: No1 GALLONS X 1000	() Gallons WEIGHT
Ö. BΑ	TYPE: TANK DUMP DRUMS CARTONS OTHER	——Drilling, Groundwater
ETED	WASTE DESCRIPTION NON-HAZARDOUS WATER COMPONENTS OF WASTE PPM % GENERATING PR	OCESS and/or Decon Water COMPONENTS OF WASTE PPM %
第一 使表示	1. WATER 99-100% 4	
E COMP	2. TPH < 0.1% 5.	
T0 B	3. VOC'S 6. SURRY	BESI # 125025
	THE AD ADDROUGH THE DO CHE OF THE	
	THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% NON-HAZARDOUS. Larry Monthart as Agent of Omega Typed on Printed Full Name & SIGNATU	
	NIETO AND SONS TRUCKING, INC.	EPA LD. NO.
RITER	ADDRESS 1281 BREA CANYON ROAD	SERVICE ORDER NO.
FRANSPOR	CITY, STATE, ZIP BREA, CALIFORNIA 92821	PICK UP DATE
TRAN	PHONE NO. (714) 990-6855	1 2 05/ 08/06
	TRUCK, UNIT, I.D. NO. X 7 44-37 TYPED OR PRINTED FULL NAME & SIGNATU	RE DATE
	NAME DeMenno Kerdoon	EPA I.D. NO. DISPOSAL METHOD
	ADDRESS 2000 N. Alameda Street	LANDFILL X RECYCLER
	CITY, STATE, ZIP <u>Compton, CA 90222</u>	Recycler
	PHONE NO310-537-7100	(
TSD FACILIIN	TYPED OR PRINTED FULL NAME & SIGNATU	RE DATE
	GEN OLD/NEW L A TONS	
	TRANS S B	
	C/Q RT/CD HWDF NONE DISCRE	PANCY

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Appendix J

Depth Discrete Laboratory Reports

UNSCANNABLE MEDIA

To use the unscannable media document # 2154794 contact the Region IX Superfund Records Center at 415-536-2000.

ARCADIS

Appendix K

Groundwater Sampling Laboratory Reports

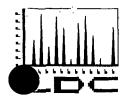
UNSCANNABLE MEDIA

To use the unscannable media document # 2154795 contact the Region IX Superfund Records Center at 415-536-2000.

ARCADIS

Appendix L

EPA Level III QC Review of Select Laboratory Reports



LABORATORY DATA CONSULTANTS, INC.

7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

Arcadis August 30, 2006 1400 North Harbor Blvd, Suite 700

Fullerton, CA 92835 ATTN: Mr. Ron Halpern

SUBJECT: Omega Chemical, Data Validation

Dear Mr. Halpern,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on August 10, 2006. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 15355:

SDG#	<u>Fraction</u>
06G039	Volatiles, 1,2,3-Trichloropropane, Semivolatiles, 1,4- Dioxane, N-Nitrosodimethylamine, Dissolved Metals, Wet Chemistry

The data validation was performed under EPA Level III guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998

Please feel free to contact us if you have any questions.

Sincerely,

Stella S. Cuenco

Project Manager/Senior Chemist

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	90/10					LD	C #	153	355	(Ar	ca	dis	-Lo	s A	۱ng	ele	s, (CA	10	me	ga	Ch	em	ica	ıl)												
LDC	SDG#	DATE REC'D	(3) DATE DUE		OA 60B)	1,2,3 (82 -Si	60B	SV	OA 70C)	SV: (827 -SI	70C	1, Diox (827	ane	ND (152	MA (5C)	Me	ss. tals 846)	S	CI,F O ₄ PO ₄	NC.),-N	(33	N- 5.2)	Cr((21)	(VI) 8.6)	CL (314	.O₄ 4.0)	Dis S (37)	i i	TE (16	0S 0.1)	TK (35	(N 1.3)	TC (41	IC 5.1)		
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Α	06G039	08/10/06	08/31/06	4	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	Ш	
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Omega Chemical Data Validation Reports LDC# 15355

Volatiles

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Omega Chemical

Collection Date:

July 10, 2006

LDC Report Date:

August 25, 2006

Matrix:

Water

Parameters:

Volatiles

Validation Level:

EPA Level III

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 06G039

Sample Identification

OC2-PMW15-0-17

OC2-PMW15-0-17DL

OC2-PMW18A-0-22

OC2-PMW18B-0-23

OC2-PMW15-0-17MS

OC2-PMW15-0-17MSD

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
7/6/06	Acetone	0.036 (≥0.05)	All samples in SDG 06G039	J (all detects) UJ (all non-detects)	А
	2-Butanone	0.040 (≥0.05)		J (all detects) UJ (all non-detects)	

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
7/14/06	Bromomethane Cyclohexane	26.9 31.2	OC2-PMW15-0-17 OC2-PMW18A-0-22 OC2-PMW18B-0-23 OC2-PMW15-0-17MS OC2-PMW15-0-17MSD MBLK2W	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	Α

All of the continuing calibration RRF values were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
7/14/06	Acetone 2-Butanone	0.029 (≥0.05) 0.045 (≥0.05)	OC2-PMW15-0-17 OC2-PMW18A-0-22 OC2-PMW18B-0-23 OC2-PMW15-0-17MS OC2-PMW15-0-17MSD MBLK2W	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	А
7/15/06	Acetone 2-Butanone	0.029 (≥0.05) 0.043 (≥0.05)	OC2-PMW15-0-17DL MBLK3W	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

The percent difference (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) were not within QC limits. Since the sample concentration was greater than the spiked concentration, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
OC2-PMW15-0-17	1,1-Dichloroethene Chloroform Tetrachloroethene Trichloroethene Trichlorofluoromethane FC 113	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Omega Chemical Volatiles - Data Qualification Summary - SDG 06G039

SDG	Sample	Compound	Flag	A or P	Reason
06G039	OC2-PMW15-0-17 OC2-PMW15-0-17DL OC2-PMW18A-0-22 OC2-PMW18B-0-23	Acetone 2-Butanone	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	А	Initial calibration (RRF)
06G039	OC2-PMW15-0-17 OC2-PMW18A-0-22 OC2-PMW18B-0-23	Bromomethane Cyclohexane	J (all detects). UJ (all non-detects) J (all detects) UJ (all non-detects)	А	Continuing calibration (%D)
06G039	OC2-PMW15-0-17 OC2-PMW15-0-17DL OC2-PMW18A-0-22 OC2-PMW18B-0-23	Acetone 2-Butanone	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	А	Continuing calibration (RRF)
06G039	OC2-PMW15-0-17	1,1-Dichloroethene Chloroform Tetrachloroethene Trichloroethene Trichlorofluoromethane FC 113	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	Α	Compound quantitation and CRQLs

Omega Chemical Volatiles - Laboratory Blank Data Qualification Summary - SDG 06G039

No Sample Data Qualified in this SDG

LDC #: 15355A1a	VALIDATION COMPLETENESS WORKSHEET	Date: <u>8/23/64</u>
SDG #: 06G039	Level III#V	Page: <u> </u> of <u> </u>
Laboratory: EMAX Laboratorie	es, Inc.	Reviewer: Ovt
METHOD: GC/MS Volatiles (I	EPA SW 846 Method 8260B)	2nd Reviewer:

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
l.	Technical holding times	A	Sampling dates: 7/16/66
II.	GC/MS Instrument performance check	À	
111.	Initial calibration	SW	
IV.	Continuing calibration	SW	ICV = 25 }
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS/p
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	Not reviewed for Level III validation.
XII.	Compound quantitation/CRQLs	SW	Not reviewed for Level III validation.
XIII.	Tentatively identified compounds (TICs)	N	Not reviewed for Level III validation.
XIV.	System performance	Ŋ	Not reviewed for Level III validation.
XV.	Overall assessment of data	Α	
XVI.	Field duplicates	SHN	D = 3,4-
XVII.	Field blanks	7	

Note: A = Acceptable

N = Not provided/applicable SW = See worksheet

ND = No compounds detected

R = Rinsate

FB = Field blank

D = Duplicate TB = Trip blank

EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

_		Water						
1	7	OC2-PMW15-0-17	11 3	OC2 PMW18C-0- 24	21 /	MBLKIW	31	
2	3	OC2-PMW15-0-17DL	12 2	062 PMW15-0-17MS) by	22	MBLKZW	32	
3	<u>. </u>	OC2-00-W-1-19 D	13 2	OC2-PMW15-0-17MSD	2 3 3	MBLKZW	33	
4	٦	OC2-00-W 4-18- D	14		24		34	
∔ 5	١	OC2-PMW15-5-21	15_		25		35	
+ 6	7	OC2-PMW15-5-21DL	16		26		36	
7	1	O C2 PMW15 1 2 0	17		27		37	
7 8	7	O C2-PMW15-1-20 DL	18		28		38	
1 9	7	OC2-PMW18A-0-22**	19		29		39	
10	~	OC2-PMW18B-0-23	20		30		40	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN. FC 1/3
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichiorotetrafluoroethane	0000. Cyclohexane
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	ଦ୍ରଦ୍ର
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	ssss.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	пп.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	ບບບບ.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	vvvv.

^{* =} System performance check compounds (SPCC) for RRF; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 15 35 A1a SDG #: 06 39

VALIDATION FINDINGS WORKSHEET Initial Contraction

Page: / of / Rev r: N6 2nd Reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A"	Please see qualifications	s below for all questions an	iswered "N". Not applicable q	uestions are identified as "N/A".
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N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?

Were percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?

Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation?__

Did the initial calibration meet the acceptance criteria?

Were all %RSDs and RRFs within the validation criteria of ≤30 %RSD and ≥0.05 RRF?

	Were all %RSDs and RRFs within the validation chiefla of \$30 %RSD and \$0.05 RRF?							
#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications	
	7/06/05	ICAL	F		0.036	All + Blks	J/uJ/A	
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LDC #: 15 355 A 1a

VALIDATION FINDINGS WORKSHEET Continuing libration

2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?

Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ? (Y) N N/A Y (N) N/A

Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF?

#	Date			Finding %D (Limit: <25.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications		
	7/13/06	RG 0 193			0. 033	3 5,7 MB4HW	J/UJA		
			M		_0 040				
	7/14/06	RGQ 234	F	·	0.029	1.4-698-10.			
			M		0 0 45	1,4,698-10, 12,13, MBL+2W			
			В	26.9					
			0000	ろ1.2					
	7/15/06	RG Q 276	F		0, 629	2, #, MBLK 3W			
	1 713 73		M		0.043	1	/		
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LDC #:_	12	Ala
SDG #:	G	039

VALIDATION FINE GS WORKSHEET Matrix Spike/Matrix Spike Duplicates

	P	of
-	Review:	SVC
2nd	Reviewer:	

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an

associated MS/MSD. Soil / Water.

Y) N N/A
Was a MS/MSD analyzed every 20 samples of each matrix?

Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound		MS %R (Limits)		,	MSD %R (Limits)		RPD (Limits)		Asso	ciated Samples	Qualifications
		12/13	H	•	()	0	(70-13	0)	()	. 1	2	No juil
			_ ک_ ا	113	10-130	,)	6.	())	. ()	`	<u> </u>	(parent cone.
					()		()	()			(parent cone. >2x Spike amt.)
				.	()	•	()	()			
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					· (-	()	(}:	 		
				 	()		- ()	(.)			
	·	Com	pound		C	C Lim	its (Sol	l) .		RPD (Soll)		QC L	imits (Water)	RPD (Water)
	Н.	1,1-Dichloroethene			Ú ·	59-1	72%			<u><</u> 22%			61-145%	<u><</u> 14%
	S.	Trichloroethene				62-1	37%		- 	_< 24%			71-120%	<u><</u> 14%
	V.	Benzene				66-1	42%			<u><</u> 21%			76-127%	≤ 11%
	CC.	Toluene				59-1	39%			<u><</u> 21%			76-125%	<u><</u> 13%
	DD.	Chiorobenzene				60-1	33%			<u><</u> 21%			75-130%	<u><</u> 13%

LDC #:_	15355 Ja
SDG #:_	06

VALIDATION FINDINGS WORKSHEET Compound Quantition and CRQLs

Page: 🚄	
Reviewer:	W
nd Reviewer:	t

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Y N (N/A) Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		1,57	H K AA S KK	NNNN > cal rang	e J dets /A
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<u></u>	<u> </u>				
	 				
	 				
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Comments: _	See sample calculation verification worksheet for recalculations		
		 · · · · · · · · · · · · · · · · · · ·	

Omega Chemical Data Validation Reports LDC# 15355

1,2,3-Trichloropropane

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Omega Chemical

Collection Date:

July 10, 2006

LDC Report Date:

August 24, 2006

Matrix:

Water

Parameters:

1,2,3-Trichloropropane

Validation Level:

EPA Level III

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 06G039

Sample Identification

OC2-PMW15-0-17

OC2-PMW18A-0-22

OC2-PMW18B-0-23

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B using Selected Ion Monitoring (SIM) for 1,2,3-Trichloropropane.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all target compounds and system monitoring compounds were within validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0%.

All of the continuing calibration RRF values were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Omega Chemical 1,2,3-Trichloropropane - Data Qualification Summary - SDG 06G039

No Sample Data Qualified in this SDG

Omega Chemical 1,2,3-Trichloropropane - Laboratory Blank Data Qualification Summary - SDG 06G039

No Sample Data Qualified in this SDG

LDC	#: <u>15355A1b</u>	_ VA	LIDATIO	N COM	PLET	ENE	SS WORKS	SHEET	Date: 8/23/
	#: 06G039			L	evel l	<i> </i> /##	-		Page: 1 of 1
Labo	ratory: <u>EMAX Laboratorie</u>	es, Inc	<u></u>						Reviewer: 3V6
MET	HOD: GC/MS 1,2,3-Trich	loropr	opane (EPA	A SW 846	6 Metho	od 82	60B-SIM)		2nd Reviewer:
							•		
	samples listed below were			ch of the	followir	ng va	lidation areas.	Validation findi	ings are noted in
allac	hed validation findings w	orksne	ets.		!				
	Validation	A ====						C	
<u> </u>	Validation	Area		^			n / /	Comments	
<u> </u>	Technical holding times			A	Sampl	ling da	ites: 7/10/6	6	
.	GC/MS Instrument perform	ance ch	neck	A-	 				
111.				F1 .				 -	
IV.		. .		<u> </u>					
<u>V.</u>				A	+				
VI.				A					
VII			s	A	 			···	
VIII		Laboratory control samples			! L	(5/	0		
IX.	Regional Quality Assurance and Quality Control			N	<u> </u>				
X.				A	<u> </u>			 _	
XI.				N	Not re	eviewe	d for Level III valid	dation.	
XII	. Compound quantitation/CR	QLs	 -	<u> </u>	Not re	eviewe	d for Level III valid	dation.	
XIII	I. Tentatively identified comp	ounds (TICs)	N	Not re	Not reviewed for Level III validation.			
ΧIV	/. System performance			N	Not reviewed for Level III validation.				
∦ xv	Overall assessment of data	1		A					
XV	I. Field duplicates		<u> </u>	N .					
XVI		_		N					
<u> </u>							_		
Note:	A = Acceptable N = Not provided/applicable	e	ND = No R = Rin	o compound sate	ds detec	ted	D = Duplic TB = Trip b		
	SW = See worksheet		FB = Fi	eld blank	 			oment blank	
Valida	ated Samples: ** Indicates sam	ple und	erwent Level I'	V validation	1 -				
	Water	11	n. 0.1 (s.		Ī	<u> </u>			
-	OC2-PMW15-0-17	T	MBLK	IW	T T	21		31	
2	OC2-PMW15-5-21	12				22		32	
3	OG2-PMW15-1- 20	13				23		33	
4	OC2-PMW18A-0-22***	14		<u></u>	. 1	24		34	
5	OC2-PMW18B-0-23	15		<u> </u>	;	25		35	
6	QC2-PMW18C-0-2 4	16				26		36	
7_	OC2-PMW18C-0-24 MS	17			1	27		37	
8	OC2-PMW18C-0-24MSD-	18		•	·	28		38	
9	1	19			.	29		39	

Omega Chemical Data Validation Reports LDC# 15355

Semivolatiles

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Omega Chemical

Collection Date:

July 10, 2006

LDC Report Date:

August 24, 2006

Matrix:

Water

Parameters:

Semivolatiles

Validation Level:

EPA Level III

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 06G039

Sample Identification

OC2-PMW15-0-17

OC2-PMW18A-0-22

OC2-PMW18B-0-23

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination (r^2) were greater than or equal to 0.990

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

Average relative response factors (RRF) for all semivolatile target compounds and system performance check compounds (SPCCs) were greater than or equal to 0.05 as required.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
7/17/06	Hexachlorocyclopentadiene	30.6	All samples in SDG 06G039	J (all detects) UJ (all non-detects)	A

The percent difference (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration RRF values were greater than or equal to 0.05.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags have been summarized at the end of the report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Omega Chemical Semivolatiles - Data Qualification Summary - SDG 06G039

SDG	Sample	Compound	Flag	A or P	Reason
06G039	OC2-PMW15-0-17 OC2-PMW18A-0-22 OC2-PMW18B-0-23	Hexachlorocyclopentadiene	J (all detects) UJ (all non-detects)	А	Continuing calibration (%D)

Omega Chemical Semivolatiles - Laboratory Blank Data Qualification Summary - SDG 06G039

No Sample Data Qualified in this SDG

LDC #: 15355A2a **VALIDATION COMPLETENESS WORKSHEET**

Level IIIAV

Reviewer: 2nd Reviewer:

Laboratory: EMAX Laboratories, Inc.

SDG #: 06G039

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
l.	Technical holding times	A	Sampling dates: 7/10/06
11	GC/MS Instrument performance check	A	
111.	Initial calibration	Α	% RSD , r~
IV.	Continuing calibration	SW	10V ≤ 25 h
V.	Blanks	_ A	
VI.	Surrogate spikes	À	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS /D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	Ν	Not reviewed for Level III validation.
XII.	Compound quantitation/CRQLs	N	Not reviewed for Level III validation.
XIII.	Tentatively identified compounds (TICs)	N	Not reviewed for Level III validation.
XIV.	System performance	И	Not reviewed for Level III validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates	Ŋ	
XVII.	Field blanks	Ŋ	

Note:

A = Acceptable

N = Not provided/applicable SW = See worksheet

ND = No compounds detected

R = Rinsate

FB = Field blank

D = Duplicate

TB = Trip blank

EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

	water				
1	OC2-PMW15-0-17	11	21	31	
2	OC2 PMW15-5-21	12	22	32	
3	OC2-PMW 15-1-20	13	23	33	
4	OC2-PMW18A-0-22	14	24	34	
5	OC2-PMW18B-0-23	15	25	35	
6	OC2-PMW18C-0-24	16	26	36	
7	MBZKIN	17	27	37	
8		18	28	38	
9		19	29	39	
10		20	30	40	



METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol**	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenoi**	III. Benzo(a)pyrene**
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol**	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene**	VV. Anthracene	-KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenoi*	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene**	T. 4-Chloroanlline	II. 4-Nitrophenoi*	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachiorobutadiene**	JJ. Dibenzofuran	YY. Fluoranthene**	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol**	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butyibenzyiphthafate	PPP. Benzolc Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene*	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine*	Y. 2,4,6-Trichlorophenol**	NN. Fiuorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	пт.
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)**	FFF. Di-n-octylphthalate**	UUU.
N. 2-Nitrophenol**	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	vw.
O. 2,4-Dimethylphenol -	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	www.

LDC #:_	1535	A 29
SDG #:	06	39

VALIDATION FIND Continuing dibration

P	<u> 1 of .) .</u>
Revie	No
2nd Reviewer:	N

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

N N/A N N/A A/N(N)Y

Was a continuing calibration standard analyzed at least once every 12 hours of sample analysis for each instrument? Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's? Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF?

#	Date	Standard ID	Compound	Finding %D (Limit: <u><</u> 25.0%)	Finding RRF (Limit: <u>></u> 0.05)	Associated Samples	Qualifications
	7/17/06	RGX 070	X	30.6		All + Blk	J/UT/A
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	<u> </u>				·		
	 				······································		
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Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Omega Chemical

Collection Date:

July 10, 2006

LDC Report Date:

August 24, 2006

Matrix:

Water

Parameters:

Semivolatiles

Validation Level:

EPA Level III

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 06G039

Sample Identification

OC2-PMW15-0-17

OC2-PMW18A-0-22

OC2-PMW18B-0-23

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Semivolatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all target compounds and system monitoring compounds were within validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0%.

The percent difference (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration RRF values were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MBLK1W	7/12/06	Bis(2-ethylhexyl)phthalate	1.1 ug/L	All samples in SDG 06G039

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration	
OC2-PMW18A-0-22	Bis(2-ethylhexyl)phthalate	2 ug/L	2U ug/L	
OC2-PMW18B-0-23	Bis(2-ethylhexyl)phthalate	2.1 ug/L	2.1U ug/L	

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
RGZ072/3LCS/D (All samples in	Bis(2-ethylhexyl)phthalate	-	-	31 (≤30)	J (all detects) UJ (all non-detects)	Р
SDG 06G039)	Pentachlorophenol	-	-	34 (≤30)	J (all detects) UJ (all non-detects)	,

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags have been summarized at the end of the report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Omega Chemical Semivolatiles - Data Qualification Summary - SDG 06G039

Sample	Compound	Flag	A or P	Reason
OC2-PMW15-0-17 OC2-PMW18A-0-22	Bis(2-ethylhexyl)phthalate	J (all detects) UJ (all non-detects)	Р	Laboratory control samples (RPD)
OC2-PMW18B-0-23	Pentachlorophenol	J (all detects) UJ (all non-detects)		
	OC2-PMW15-0-17 OC2-PMW18A-0-22	OC2-PMW15-0-17 Bis(2-ethylhexyl)phthalate OC2-PMW18A-0-22	OC2-PMW15-0-17 Bis(2-ethylhexyl)phthalate J (all detects) OC2-PMW18A-0-22 UJ (all non-detects) OC2-PMW18B-0-23 Pentachlorophenol J (all detects)	OC2-PMW15-0-17 Bis(2-ethylhexyl)phthalate J (all detects) P UJ (all non-detects) OC2-PMW18B-0-23 Pentachlorophenol J (all detects)

Omega Chemical Semivolatiles - Laboratory Blank Data Qualification Summary - SDG 06G039

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
06G039	OC2-PMW18A-0-22	Bis(2-ethylhexyl)phthalate	2U ug/L	А
06G039	OC2-PMW18B-0-23	Bis(2-ethylhexyl)phthalate	2.1U ug/L	A

VALIDATION COMPLETENESS WORKSHEET LDC #: 15355A2b

SDG #: 06G039

Level IIIAV

Reviewer: 2nd Reviewer:

Laboratory: EMAX Laboratories, Inc.

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area	=======================================	Comments
l.	Technical holding times	_ A	Sampling dates: 7 /10 /06
II.	GC/MS Instrument performance check	A	
111.	Initial calibration	A	
IV.	Continuing calibration	Á	10 4 25 Z
V.	Blanks	ŚW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	dient specified
VIII.	Laboratory control samples	SW	ics/p
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	Not reviewed for Level III validation.
XII.	Compound quantitation/CRQLs	N	Not reviewed for Level III validation.
XIII.	Tentatively identified compounds (TICs)	N,	Not reviewed for Level III validation.
XIV.	System performance	N	Not reviewed for Level III validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates	ħ_	
XVII.	Field blanks	Ŋ	

Note:

A = Acceptable

ND = No compounds detected R = Rinsate

D = Duplicate

N = Not provided/applicable SW = See worksheet

FB = Field blank

TB = Trip blank EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

	water	·			
1	OC2-PMW15-0-17	11	21	31	
4	QC2-PMW15-5-21	12	22	32	
3	QC2 PMW15-1-2 0	13	23	33	
† 4	OC2-PMW18A-0-22***	14	24	34	
4 5	OC2-PMW18B-0-23	15	25	35	
† 6	0C2-PMW18C-0-24	16	26	36	
† 7	MBZKIN	17	27	37	
8		18	28	38	
9		19	29	39	
10		20	30	40	

III, tet, ss, TT only)

VALIDATION FIND S WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenoi**	P. Bis(2-chioroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol**	III. Benzo(a)pyrene**
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol**	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene**	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenoi*	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene**	T. 4-Chloroaniline	II. 4-Nitrophenoi*	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachiorobutadiene**	JJ. Dibenzofuran	YY. Fluoranthene**	NN N . Aniiine
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol**	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthafate	PPP. Benzolc Acid
1. 4-Methylphenol	X. Hexachlorocyclopentadiene*	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine*	Y. 2,4,6-Trichlorophenoi**	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachioroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chioronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	тт.
M. Isophorone	BB. 2-Nitroaniline	QQ, N-Nitrosodiphenylamine (1)**	FFF. Di-n-octylphthalate**	uuu.
N. 2-Nitrophenoi**	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	w.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	www.

LDC #:	5355	126
SDG #:	06	39

VALIDATION FINDINGS WORKSHEET

Page	of	1
Review	ب	N6
2nd Reviewer:	4	_

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

N N/A
Was a method blank analyzed for each matrix?

Y\N N/A Was a method blank analyzed for each concentration preparation level?

Y N N/A Was a method blank associated with every sample?

Y/N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 7/12/66 Blank analysis date: 7/17/66

Conc. units: us // Associated Samples: A!

Blank analysis date:___

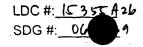
Associated Samples.									
Compound	Blank ID					Sample Identificat	ion		
	MBLKIW	2/	3/	4	5	6/			
£FE	1. 1	12/1.84	2.6 /W	2/U	22.1/y	2.6 V			
			, , , , ,						
								<u> </u>	

Conc. units.	Associated Samples,									
Compound	Blank ID		Sample Identification							
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CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:

Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

Blank extraction date:



VALIDATION FINDINGS WORKSHEET <u>Laboratory Cont</u> Samples (LCS)

: :_	of
Reviewer:	NC
2nd Reviewer:	(

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y) N N/A

Was a LCS required?

Y(N)N/A

Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)		RPD (Limits)	Associated Samples	Qualifications
		RGZ 672/3 KS/D	EEE	()	()]	31 (30)	An + Bk	J/NJ/P
			TT	()	(> [34 (<u>)</u>)		
				()	(5	()		
				()	()	()		
				()	(()		
				()	()	()		
				()	()	()		
				. ()	(,	()		
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			<u> </u>	()	()	()		
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				()	()	()		
				()	()	()		
				()	(1	()		

Omega Chemical Data Validation Reports LDC# 15355

1,4-Dioxane

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Omega Chemical

Collection Date:

July 10, 2006

LDC Report Date:

August 24, 2006

Matrix:

Water

Parameters:

1,4-Dioxane

Validation Level:

EPA Level III

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 06G039

Sample Identification

OC2-PMW15-0-17

OC2-PMW18A-0-22

OC2-PMW18B-0-23

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for 1,4-Dioxane.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

1. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for 1,4-Dioxane.

Average relative response factors (RRF) for 1,4-Dioxane were within validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0%.

All of the continuing calibration RRF values were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No 1,4-Dioxane was found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags have been summarized at the end of the report if data has been qualified.

XVI, Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Omega Chemical 1,4-Dioxane - Data Qualification Summary - SDG 06G039

No Sample Data Qualified in this SDG

Omega Chemical 1,4-Dioxane - Laboratory Blank Data Qualification Summary - SDG 06G039

No Sample Data Qualified in this SDG

LDC #: 15355A2c VALIDATION COMPLETENESS WORKSHEET

SDG #: 06G039 Level III/A+
Laboratory: EMAX Laboratories, Inc.

Page: | of / Page: | of / Reviewer: Ovt 2nd Reviewer: •

METHOD: GC/MS 1,4-Dioxane (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
<u> </u>	Technical holding times	A	Sampling dates: 7/10/06
II.	GC/MS Instrument performance check	A	
111.	Initial calibration	A_	
IV.	Continuing calibration	A	
V.	Blanks	A	
VI.	Surrogate spikes	Α	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	client specified LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	Not reviewed for Level III validation.
XII.	Compound quantitation/CRQLs	N_	Not reviewed for Level III validation.
XIII.	Tentatively identified compounds (TICs)	N	Not reviewed for Level III validation.
XIV.	System performance	N	Not reviewed for Level III validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates	Ŋ	
XVII.	Field blanks	N	

Note:

A = Acceptable

N = Not provided/applicable

SW = See worksheet

ND = No compounds detected

R = Rinsate FB = Field blank D = Duplicate TB = Trip blank

EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

Water					
1	OC2-PMW15-0-17	11	21	31	
† 2	OC2-PMW15-5-2 1	12	22	32	
₹	QC2-PMW15-1-20	13	23	33	
4	OC2-PMW18A-0-22**	14	24	34	
5	OC2-PMW18B-0-23	15	25	35	
6	OC2-PMW18C-0-24	16	26	36	
7	MBLKIW	17	27	37	
8		18	28	38	
9		19	29	39	
10		20	30	40	

Omega Chemical Data Validation Reports LDC# 15355

N-Nitrosodimethylamine

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Omega Chemical

Collection Date:

July 10, 2006

LDC Report Date:

August 25, 2006

Matrix:

Water

Parameters:

N-Nitrosodimethylamine

Validation Level:

EPA Level III

Laboratory:

EMAX Laboratories, Inc./Maxxam Analytics, Inc.

Sample Delivery Group (SDG): 06G039/A670791

Sample Identification

OC2-PMW15-0-17

OC2-PMW18A-0-22

OC2-PMW18B-0-23

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1625 for N-Nitrosodimethylamine.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. HRGC/HRMS Instrument Performance Check

Mass resolution was checked at the required frequencies.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 25.0% for N-Nitrosodimethylamine.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0%.

The percent difference (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No N-Nitrosodimethylamine was found in the method blanks.

VI. Surrogate Spikes

Surrogates were not required by the method.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags have been summarized at the end of the report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags have been summarized at the end of the report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Omega Chemical N-Nitrosodimethylamine - Data Qualification Summary - SDG 06G039/A670791

No Sample Data Qualified in this SDG

Omega Chemical N-Nitrosodimethylamine - Laboratory Blank Data Qualification Summary - SDG 06G039/A670791

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET LDC #: 15355A2d Level III4V-SDG #: 06G039/A670791 Laboratory: EMAX Laboratories, Inc./Maxxam Analytics, Inc. Reviewer: 2nd Reviewer: MS N-Nitrosodimethylamine (EPA Method 1625)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
1.	Technical holding times	4	Sampling dates: 7/10/0%
_ H.	GC/MS Instrument performance check	NA	· · · · · · · · · · · · · · · · · · ·
III.	Initial calibration	<u> </u>	% R5D ≤ 25 No Feg=
IV.	Continuing calibration /ICV	Ĺ	%D = 25 b
V.	Blanks	Å	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates / the P	N/A	chient specified
VIII.	Laboratory control samples	<u> 4</u>	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	λ_	
XI.	Target compound identification	4	Not reviewed for Level III validation.
XII.	Compound quantitation/CRQLs	<u> </u>	Not reviewed for Level III validation.
XIII.	Tentatively identified compounds (TICs)	Ŋ	Not reviewed for Level III validation.
XIV.	System performance	A	Not reviewed for Level III validation.
XV.	Overall assessment of data	Ą	
XVI.	Field duplicates	N	
XVII.	Field blanks	7	

Note: A = Acceptable

N = Not provided/applicable

SW = See worksheet

ND = No compounds detected

R = Rinsate

FB = Field blank

D = Duplicate TB = Trip blank

EB = Equipment blank

Validated Samples; ** Indicates sample underwent Level IV validation

	fel Hoo's					
1_	OC2-PMW15-0-17	11	MB	21	31	
2	OC2-PMW15-5-2 1	12		22	32	
3	OG2-PMW15-1-20	13		23	33	
4	OC2-PMW18A-0-22**	14		24	34	<u>.</u> ,
5	OC2-PMW18B-0-23	15		25	35	
6	0C2-PMW18C-0-2 4	16		26	36	
7		17		27	37	<u></u>
8		18		28	38	
9		19		29	39	
10		20		30	40	

Omega Chemical Data Validation Reports LDC# 15355

Dissolved Metals

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Omega Chemical

Collection Date:

July 10, 2006

LDC Report Date:

August 25, 2006

Matrix:

Water

Parameters:

Dissolved Metals

Validation Level:

EPA Level III

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 06G039

Sample Identification

OC2-PMW15-0-17

OC2-PMW18A-0-22

OC2-PMW18B-0-23

OC2-PMW15-0-17MS

OC2-PMW15-0-17MSD

Introduction

This data review covers 5 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6020A and 7000 for Dissolved Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB/CCB	Antimony	0.353 ug/L	All samples in SDG 06G039

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
OC2-PMW18A-0-22	Antimony	0.406 ug/L	0.406U ug/L

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Internal Standards (ICP-MS)

Raw data were not reviewed for this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XI. Sample Result Verification

Raw data were not reviewed for this SDG.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Blanks

No field blanks were identified in this SDG.

Omega Chemical Dissolved Metals - Data Qualification Summary - SDG 06G039

No Sample Data Qualified in this SDG

Omega Chemical Dissolved Metals - Laboratory Blank Data Qualification Summary - SDG 06G039

SDG	Sample	Analyte	Modified Final Concentration	A or P
06G039	OC2-PMW18A-0-22	Antimony	0.406U ug/L	А

VALIDATION COMPLETENESS WORKSHEET LDC #: 15355A4 SDG #: _06G039

Level III//

Laboratory: EMAX Laboratories, Inc.

9n4

Date: 8-93-06 Page:__Lof_

Reviewer: MG 2nd Reviewer: My

METHOD: Dissolved Metals (EPA SW 846 Method 6020A/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
l	Technical holding times	Α	Sampling dates: 7-10-06
II.	Calibration	Α	
111.	Blanks	SW	
IV.	ICP Interference Check Sample (ICS) Analysis	Α	
V.	Matrix Spike Analysis	Α	MS/MSD
VI.	Duplicate Sample Analysis	2	
VII.	Laboratory Control Samples (LCS)	A	LCS/LCSD
VIII.	Internal Standard (ICP-MS)	2	Not reviewed for level 111
IX.	Furnace Atomic Absorption QC	7	Not reviewed for level III Not utilized
X.	ICP Serial Dilution	Α	
XI.	Sample Result Verification	2	Not reviewed for Level III validation.
XII.	Overall Assessment of Data	Α	
XIII.	Field Duplicates	7	
XIV.	Field Blanks	2	

Note:

A = Acceptable

N = Not provided/applicable SW = See worksheet

ND = No compounds detected

R = Rinsate FB = Field blank D = Duplicate

TB = Trip blank EB = Equipment blank

Validated Samples: ** Indicates sample underwent Level IV validation

1	OC2-PMW15-0-17 /	11	PBW	21	31	
2	-062-PMW15-5-21	12		22	32	
3	0C2-PMW15-1-20-	13		23	33	
4	OC2-PMW18A-0-22	14		24	 34	
5	OC2-PMW18B-0-23	15		25	35	
6	-OC2-PMW18C-0-24	16		26	36	
7	OC2-PMW15-0-17MS	17		27	37	
8	OC2-PMW15-0-17MSD	18		28	38	
9	OC2-PMW18C-0-24M3	19		29	39	
10	-OC2-PMW18C-0-24MSD	20		30	40	

Notes:	 		
	 <u> </u>	 	

LDC #: 15355 A4 SDG #: 06G039

VALIDATION FINDINGS WORKSHEET Sample Specific Element Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: LM

All circled elements are applicable to each sample.

Sample	ID Mate	ix Target Analyte List (TAL)
1,4,	5 W	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B)Si, CN,
WC 7.	3 1	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B Si, CN,
49		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg) Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN',
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN',
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al. Sb. As. Ba. Be, Cd. Ca. Cr. Co. Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,
	<u> </u>	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN',
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,
<u> </u>		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN ⁻ ,
<u> </u>	1 	Analysis Method
ICP	<u> </u>	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN',
ICP Trace		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Π, V, Zn, Mo, B, Si, CN',
ICP-MS	W	(Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mp) Hg, (Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B)Si, CN',
GFAA	<u> </u>	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN,

ELEMENTS.4

Comments: Mercury by CVAA if performed

LDC#: 15-355A4 SDG #: (

VALIDATION F WGS WORKSHEET PB/ICB/CCB

METHOD: Nace Metals (EPA SW 846 Method 6010/7000) Soil preparation factor applied: NA Sample Concentration units, unless otherwise noted: MA Associated Sample

Associated Samples:

a 11

dilipio (oncontratic	m dimo, di	iess otnerw	ise noted.		<i>,</i> <u> </u>	Associated		a.			tanana (Alamana and Alamana)	an Seminor Sandren	description of the second
				100		100			Sample/ldi	entification				
Analyte	Maximum PB¹ (mg/Kg)	Maximum PB* (ug/L)	Maximum ICB/CCB* (ug/L)	Blank Action Limit	4									
Al														
Sb			0.353	1.76	0.406			-			-			
As														
Ва														
Ве														
Cd						<u></u>								
Ca														ļ
Cr													<u> </u>	
Со	 		 	 	ļ		ļ	<u> </u>	<u> </u>			ļ		
Cu]		<u> </u>	 	 		· · · · · · · · · · · · · · · · · · ·		,				<u> </u>	
Fe	 		<u> </u>	 	<u> </u>	ļ	<u> </u>		ļ				<u> </u>	
Pb	 	 		 	 	 			ļ					
Mg	 	ļ	 	 	 		 	ļ ·				ļ	 	
Mn	 	 	<u> }</u>	 	 		 		 		<u> </u>	 	 	
Hg	 	 -		 	 	 	 	 	 	 		 	 	
Мо	 	 	╂			 	ļ	<u> </u>	 		 	ļ	 	
Ni		 	-∦	-	 	 	-		 		ļ	 		
К	 	 	╂	╢		 	 -	 	 	 	 	<u> </u>	ļ	
Se	{	 			╣	+	 	 			<u> </u>	 	 	
Ag	╂			 		 	 		 	ļ	 	 	 	
Na	╂	╂		╫		 	+	 		 	 	 	 	
<u> </u>	╂	╢	 	 		+	 	 	 	 	 	 	 	
V	 	\ 	╂	 	 		 	 	 	 	 	 		+
Zn	╢	╂──	 			 	-	 	 	 	 	 -		
Sn	╢	 	-}	╢		 	 	 	 	 	 	 	 	
B	ــــــــــــــــــــــــــــــــــــــ	<u> </u>	ــــــــاك	حييك			ب نوب ا		the Identification		ــــــــــــــــــــــــــــــــــــــ		- A Thomas	<u> </u>

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note: a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

Omega Chemical Data Validation Reports LDC# 15355

Wet Chemistry

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Omega Chemical

Collection Date:

July 10, 2006

LDC Report Date:

August 24, 2006

Matrix:

Water

Parameters:

Wet Chemistry

Validation Level:

EPA Level III

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 06G039

Sample Identification

OC2-PMW15-0-17

OC2-PMW18A-0-22

OC2-PMW18B-0-23

OC2-PMW15-0-17MS

OC2-PMW15-0-17DUP

Introduction

This data review covers 5 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 160.1 for Total Dissolved Solids, EPA Method 218.6 for Hexavalent Chromium, EPA Method 300.0 for Bromide, Chloride, Fluoride, Nitrate as Nitrogen, Nitrite as Nitrogen, Orthophosphate as Phosphorus, and Sulfate, EPA Method 314.0 for Perchlorate, EPA Method 335.2 for Cyanide, EPA Method 351.3 for Total Kjeldahl Nitrogen, EPA Method 370.1 for Dissolved Silica, and EPA Method 415.1 for Total Organic Carbon.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable with the following exceptions:

Date	Lab. Reference/ID	Analyte	%R (Limits)	Associated Samples	Flag	A or P
7/20/06	ICV	Total kjeldahl nitrogen	116 (90-110)	All samples in SDG 06G039	J (all detects)	Р

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Relative percent differences (RPD) were within QC limits.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Omega Chemical Wet Chemistry - Data Qualification Summary - SDG 06G039

SDG	Sample	Analyte	Flag	A or P	Reason
06G039	OC2-PMW15-0-17 OC2-PMW18A-0-22 OC2-PMW18B-0-23	Total kjeldahl nitrogen	J (all detects)	Р	Calibration (%R)

Omega Chemical

Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 06G039

No Sample Data Qualified in this SDG

SDG	#: <u>15355A6</u> #: <u>06G039</u> ratory: <u>EMAX Laboratoric</u>		ALIDATIO	L	PLETE evel III m&		WORI	KSHEET		Date: <u>ピーラ3-</u> の Page: <u>L</u> of <u>L</u> Reviewer: <u></u> ハケ
Metho	HOD: (Analyte) Bromide od 335.2), Hexavalent Ch), TDS (EPA Method 160	romi	ım (EPA Me	λe -N, Nitrite- ethod 218.6	N, Ortho	lorate	EPA Me	ethod 314.0	A Me	2nd Reviewer: VM sthod 300.0), Cyanide (EPA ssolved Silica (EPA Method
	amples listed below wer tion findings worksheets		ewed for ea	ch of the f	ollowing	validat	ion area	s. Validatio	n fine	dings are noted in attached
	Validation	Area	<u> </u>		<u> </u>			Comm	ents	
1.	Technical holding times			A	Sampling	dates:	7-10	0-06		
lla.	Initial calibration			A						
Ilb.	Calibration verification			SW						
III.	Blanks			Α						
IV	Matrix Spike/Matrix Spike D	Ouplica	tes	ASW	MS			-		
V	Duplicates			Α	Dul	>				
VI.	Laboratory control samples	}		A	LCS	/LC	SD	<u> </u>		
VII.	Sample result verification	7	Not reviewed for Level III validation.							
VIII.				Α						
IX.	Field duplicates	N								
x	Field blanks			7						
Note:	A = Acceptable N = Not provided/applicabl SW = See worksheet ted Samples: ** Indicates sam		R = Rin FB = Fi	eld blank		ı	D = Dup TB = Tri EB = Eq		k	
validai	all water	ipie un	derwent Lever	iv validation						
1	OC2-PMW15-0-17	11	OG2-PMW18	C-0-24 MS	21				31	
2	062 PMW15-5-21 -	12	OC2-PMVV18	C-0-24D ⊍P	22				32	
3	OC2-PMW 15-1-20	13	PBWI		23				33	
4	OC2-PMW18A-0-22**	14	PBW2		24				34	
5	OC2-PMW18B-0-23	15		<u>.</u>	25				35	
6	0C2-PMW 18C-0-24-	16			26				36	
7	OC2-PMW15-0-17MS	17			27	_			37	
8	OC2-PMW15-0-17DUP	18			28				38	
9	OC2-PMW15-1-20MS	19			29				39	
10	OC2-PMW15-1-20DUP	20			30				40	
Notes										

gn H

LDC #: 15355A6 SDG #:066039

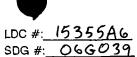
VALIDATION FINDINGS WORKSHEET Sample Specific Analysis Reference

Page:__l_of_l Reviewer:_ MG_ 2nd reviewer:_ MH_

All circled methods are applicable to each sample.

Ī	ample ID	<u> Matrix</u>	Parameter (diss)
	1,4,5	_ W	PH (TOS CILE (NO) (NO) (SO) (FO) ALK (CN) NH3 (TKN) (TOC (CRE) (CIO) (Br) 5:
Ľ	QC 7, €		pH TDS CI F NO3 NO2 SO4 PO4 ALK (CN) NH3 TKN TOC CR6+ CIO4 Br
~	9,10	-	pH TDS CI F NO3 NO2 SO4 PO4 ALK CN' NH3 TKN TOC CR6+ (CIO) Br
VI.	11,12	<u> </u>	PH TDS CI F NO3 NO2 SO4 PO4 ALK CN' NH3 TKN TOC CR CO CIO4 Br (3:55)
L			pH TDS CI F NO3 NO2 SO4 PO4 ALK CN NH3 TKN TOC CR6+ CIO4 Br
			pH TDS CI F NO3 NO2 SO4 PO4 ALK CN NH3 TKN TOC CR6+ CIO4 Br
			pH TDS CI F NO3 NO2 SO4 PO4 ALK CN NH3 TKN TOC CR6+ CIO4 Br
L			PH TDS CLF NO3 NO2 SO4 PO4 ALK CN NH3 TKN TOC CR6+ ClO4 Br
	·		PH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
			PH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN' NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
			PH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
			PH TDS CLF NO3 NO2 SO4 PO4 ALK CN NH3 TKN TOC CR6+ ClO4 Br
			PH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
			pH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
			pH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
			PH TDS CLF NO3 NO2 SO4 PO4 ALK CN NH3 TKN TOC CR6+ ClO4 Br
			pH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
			pH TDS CI F NO3 NO2 SO4 PO4 ALK CN NH3 TKN TOC CR6+ CIO4 Br
			pH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
			pH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
$\ \cdot \ $			pH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
		·	ph TDS CI F NO3 NO2 SO4 PO4 ALK CN NH3 TKN TOC CR6+ CIO4 Br
			PH TDS CI F NO3 NO2 SO4 PO4 ALK CN NH3 TKN TOC CR6+ CIO4 Br
			pH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN ⁻ NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
			pH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
			PH TDS CI F NO3 NO2 SO4 PO4 ALK CN" NH3 TKN TOC CR6+ CIO4 Br
			pH TDS CI F NO ₃ NO ₂ SO ₄ PO ₄ ALK CN NH ₃ TKN TOC CR ⁶⁺ CIO ₄ Br
			PH TDS CI F NO3 NO2 SO4 PO4 ALK CN' NH3 TKN TOC CR6+ CIO4 Br
			pH TDS CLE NO, NO, SO, PO, ALK CN: NH, TKN TOC CR6+ ClO, Br

Comp	nents:
-	





Page:_	l of l				
Reviewer:_	MG				
2nd Reviewer:	w				

METHOD: Inorganics,	EPA Method	see	cover	

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Were all instruments calibrated daily, each set-up time, and were the proper number of standards used?

Y(N) N/A Were all initial and continuing calibration verification percent recoveries (%R) within the control limits of 90-110%?

YN N/A Are all correlation coefficients >0.995?

LEVEL IV/D ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Initial and Continuing Calibration Recalculation Worksheet for recalculations.

Y N N/A Was a balance check conducted prior to the TDS analysis.?

Y N N/A Was the titrant normality checked?

#	Date	Calibration ID	Analyte	%R	Associated Samples	Qualifications
l	7-20-06	ICV	TKN	116 (90-110)	all	J dets/P
				•		
		<i>y</i>				
		<u> </u>				
<u> </u>			<u> </u>		1	<u> </u>
 						
		 			 	
 						
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						<u> </u>

Comments					 	
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